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ABSTRACT

To this new and updated second edition, over 160 new sites and their descriptions have been added. The first major section, outdoor education areas, includes state Parks, forests, and wildlife areas; historic sites and memorials; Wayne National Forest; metropolitan county and city parks; agency and private camps; conservation agency properties; conservancy district lands and reservoirs; school land laboratories; and private conservation farms and camp grounds. The second section is devoted to selected state, nature conservancy, university, and private nature preserves. In both sections, each outdoor area summary is arranged alphabetically according to county and includes size and location, correct name, a short description, and the address of the person to contact for its use. Additional information concerning suitability for camping is given in chart form in the third section. Seven color maps describing Ohio geology, glacial deposits, soil regions, surface water, groundwater, original vegetation, and major forest types follow. Also included are a selected bibliography, and index of sites, and directions for using this publication. (SA)

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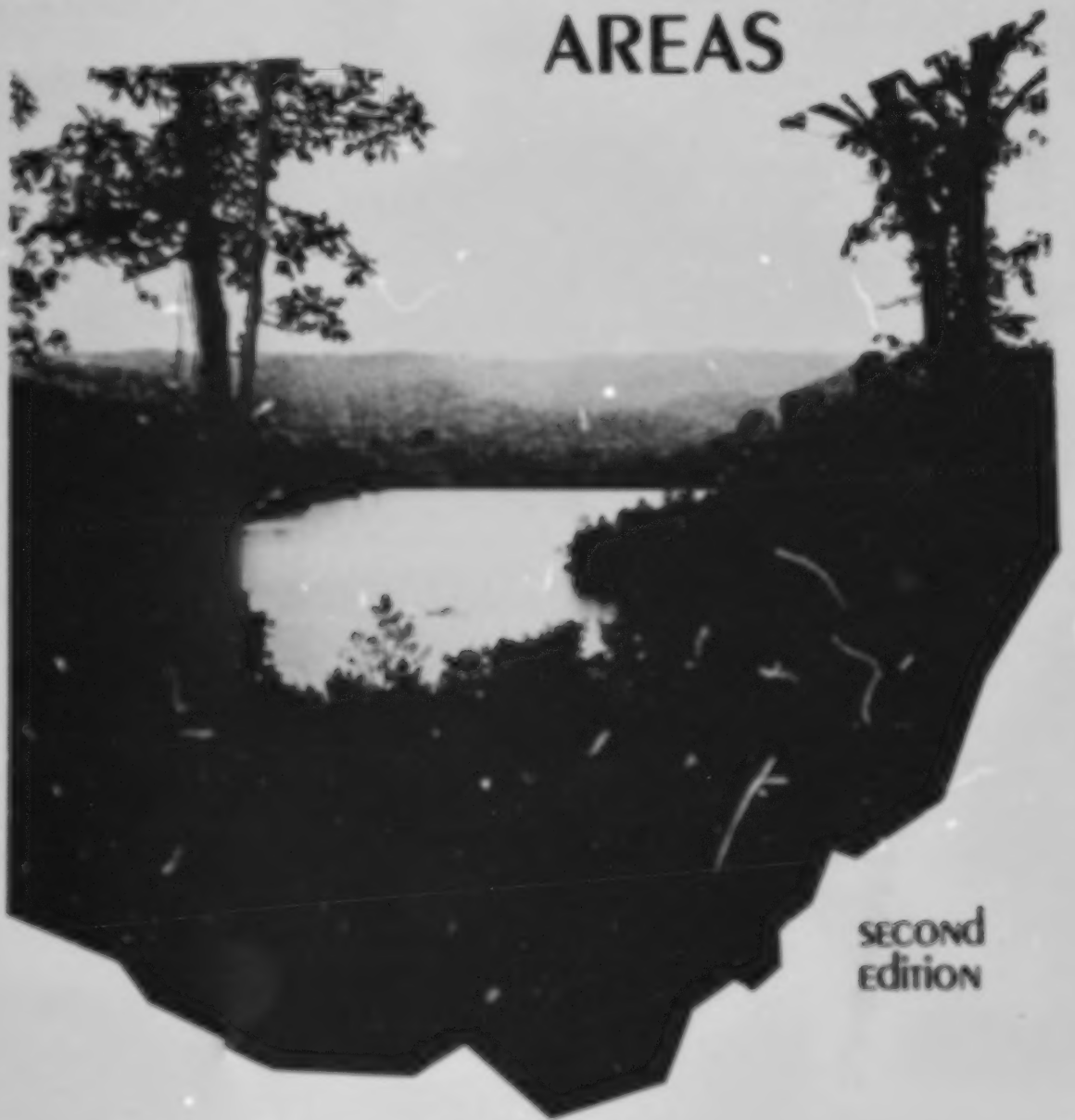
A GUIDE TO OHIO OUTDOOR EDUCATION AREAS



SECOND EDITION

THE OHIO DEPARTMENT OF NATURAL RESOURCES

THE OHIO ACADEMY OF SCIENCE

OE 0.20 Y29

A GUIDE TO OHIO OUTDOOR EDUCATION AREAS

SECOND EDITION

including—

state parks, forests and wildlife areas; historic sites and memorials; Wayne National Forest; metropolitan, county, and city parks; agency and private camps; conservation agency properties; conservancy district lands and reservoirs; school land laboratories; private conservation farms and campgrounds; and nature preserves.

Prepared by
Ruth W. Melvin

for

James A. Rhodes
Governor

THE STATE OF OHIO
DEPARTMENT OF NATURAL RESOURCES

Robert W. Teater
Director

and

THE OHIO ACADEMY OF SCIENCE

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FOREWORD
TO THE SECOND EDITION

It has been a pleasure and an honor for the Ohio Department of Natural Resources to work cooperatively with the Ohio Academy of Science in the publication of this second edition of the *Guide to Ohio Outdoor Education Areas*. The Department has enjoyed a close association with Ruth Melvin and other members of the Academy for many years, and shares a strong interest in furthering outdoor education. A joint effort on such a project as the *Guide* was, therefore, natural and, we believe, highly desirable in that it has enabled the citizens of the state to benefit from the combined resources of both organizations.

Since it was first published in 1970, the *Guide* has been a unique tool for educators desiring to make productive use of the outdoors as classroom and laboratory. No other single source provides a comparable survey of the areas in Ohio that are available and well suited for educational purposes.

This second edition is a substantial revision of the original text. Many new areas have been added, a few no longer available to the public have been dropped, and all information updated as much as the constantly changing patterns of land ownership and management would permit.

We hope teachers and students and interested Ohioans of all ages will make full use of this book, and actively enjoy the rewarding adventure of discovering our state's immense natural richness and diversity.

Dr. Robert W. Teater

Director, Ohio Department of Natural Resources

foreword to the first edition

When my great-grandparents, like those of many native Ohioans, entered this beautiful and bounteous state, they came into a land of great forests. This landscape was rolling, but level enough so that for the first time, perhaps in history, it was possible to divide the land into mile-square sections by roads running north-south and east-west. The settlers' chief problem was to remove enough of the giant trees to grow food and fiber for themselves and their livestock. The forest (and in places the prairie) was in a sense their rival for space as well as a source of building material. Since it seemed unlimited, they gave little thought to the fact—if they knew about it—that in older lands such as Switzerland, France, Denmark, and Germany people had found it necessary to restore the forests to provide needed timber and protect the water supply. One of their first concerns, after making a living, was to establish schools and later colleges. Because there was, for a long time, plenty to see and do out-of-doors and books and teachers were scarce, teaching and learning went on indoors. As high schools and colleges sprang up this continued to be true; life was studied from books and in laboratories through the microscope. It is true that for many years students were encouraged to collect plants and identify them; meanwhile, their knowledge of animals came largely from hunting, fishing, farm livestock, and pets. The main emphasis was on the three R's, their higher branches, and laboratory science.

Geologists, of course, were obliged to take their students on field trips. Some zoologists like Edward L. Rice of Ohio Wesleyan encouraged bird-study; others like the late Lynds Jones of Oberlin actually taught ecology, still gratefully recalled by alumni. Another notable example was the modest and learned naturalist Edwin Moseley who taught for years in the Sandusky High School and later at Bowling Green State University. All of nature was his province. But these men had to take what they found in the field. The possibility of setting aside nature preserves and outdoor laboratories seemed remote. A notable exception was the establishment of the Lake Laboratory or "Bug House" at Cedar Point by a consortium of colleges. This facility, since removed to Gibraltar Island, has paid rich dividends to science and its teaching.

Only in recent decades, as urban expansion, highway development, and industrial operations have threatened to destroy all traces of natural communities within the state, has it become a matter of some priority to set aside remnants of them for teaching and research. It is a pleasure to learn that there is now a total of at least 780 of these. About 100 are "winterized" and many can be used for extended visits by classes. The majority of these are available and heavily used for instruction, but some are set aside as preserves to be used in research. Credit for this great service to the public must be widely shared among many individuals and organizations, including Ohio's nature writers, professional scientists like the late Charles Dambach, lay naturalists, the Audubon Society, and the Nature Conservancy. Many of these benefactors will be identified in the text which follows. A notable example with which, in spite of my long absences from Ohio, I am familiar, is the Aullwood Audubon Center near Dayton, made possible by the generosity of Mrs. Marie Aull. A feature of this heavily used center is a reconstructed prairie of tall grasses and other plants that once flourished in enclaves in Ohio. Another is the well-known Glen Helen at Antioch College in Yellow Springs. Nor should the Ohio Forestry Association's camps and similar establishments where high school students and teachers are sent by contributions from garden clubs and other sources be overlooked.

Let no one think that these are merely "nice things" or even luxuries in a busy and preoccupied world, to be sacrificed to growing land hunger when the time comes. For in the self-regulating organization of natural communities that have maintained themselves through the ages, enriching the soil, regulating the flow of water, purifying the air, and stabilizing the land surface, we have a model for the use of energy and materials which our technical civilization, with its exploitation, waste, and pollution, has violated to a point where it threatens the quality of human life, if not its survival.

To establish them has been a difficult task. To preserve and maintain them may be even more difficult, as a conversation with those in charge of some of them will quickly prove. Constant vigilance is required to prevent invasion, damage, or even take-over for projects such as sewer lines, highways, and other developments which can be made to sound more important in this crowded world. The citizens of Ohio should stand ready to prevent this kind of mischief and lend their steady support to those who have rendered them an invaluable service.

Dr. Paul B. Sears

Emeritus Professor of Conservation, Yale University
Past President, The Ohio Academy of Science
Formerly Member, Wildlife Council, Ohio Department of Natural Resources

preface

Outdoor education will continue to be of paramount importance so long as we hope to preserve and restore the quality of life on earth. To understand and appreciate natural environment, and help the public to achieve the same, is a challenge that must be met by governmental, industrial, and private organizations as well as educational professionals. And basic to the entire undertaking, it is generally agreed, is the initially simple process of going into the outdoors, observing natural objects, and then discovering the complex relationships of all plants and animals, including man, to the physical environment.

A Guide to Ohio Outdoor Education Areas is a "natural succession" project resulting from a long-time emphasis on conservation education in the Ohio Academy of Science. It was conceived as a means of helping teachers and youth group leaders find sites for field trips, school camping, and training in outdoor education. Long before the present environmental crisis, the conviction that children and youth, no longer a part of a rural environment, should have more opportunities to encounter and study in the outdoors, in order to appreciate and conserve it, was foremost in the minds of the members of the Conservation Section of the Academy. Members themselves became involved in studying and recommending wise game laws, proper utilization of water resources, the preservation and utilization of wildlife, the acquisition of land and the formation of state parks, topographic mapping of the entire state, reforestation, and strip mine reclamation. These studies frequently led to resolutions, reports to state government, and the development of legislation.

In 1942, a nationally recognized crusader in the field, Paul B. Sears, now professor emeritus of Yale University, published a review of the history of conservation in Ohio. He later became chairman of the Conservation Committee and then president of the Academy, to which he delivered an important address entitled "Conservation in Theory and Practice." Under the leadership of Dr. Sears and many other concerned members, including the late Dr. Charles Dambach, the Conservation Section (evolved from the old Conservation Committee) has continued to be active. In 1968, acting on a recommendation calling for the promotion of conservation education in the public schools and encouragement of wider use of field study in the school program, the members formed a committee to make use of a small grant from the Edwin H. and Nellie M. Rausenberger Foundation for Conservation (a pioneer conservation group, since absorbed into the Columbus Foundation), to begin research to find areas suitable for outdoor education.

Almost simultaneously the administration of the Department of Natural Resources envisioned a descriptive guide to show the numerous educational opportunities at such sites as its parks, forests, and wildlife areas.

The private academic organization and the public governmental body became aware of the efforts of each. The result was the publication of the first *Guide to Ohio Education Areas* in 1970.

At the end of three years, the supply of the first edition, which had become outdated in a great many instances, was practically exhausted. The agency collaborators of the first edition agreed that a revision was necessary, and that the Ohio Academy, through the Conservation Section, would prepare the manuscript; the Department of Natural Resources, through its environmental education program, would assume again the responsibility of printing.

Funds for the preparation of the revised manuscript, which required contacts with each property owner and the addition of more than 160 new sites, were provided to the Academy by the Rausenberger Foundation Fund and the Orias Fund of the Columbus Foundation, and Battelle Memorial Institute. The Columbus Foundation is a public foundation supported by gifts which have been received from many individuals, families, and business organizations. Its objective is "to reach out more and more to build a better community." Battelle Memorial Institute is a multinational public-purpose organization of some 5,600 scientists, engineers, and supporting personnel. A major objective is the advancement and use of science for the benefit of mankind through technological innovation. It is reassuring to the outdoor educator that the project has had the combined support of such diversified institutions.

The preparation of the revised manuscript was guided by a new advisory committee chaired by Thomas P. Stockdale, then vice president of the Academy's Conservation Section. Upon completion of the manuscript, editorial, artistic, and production advice and services were provided by the Office of Public Information and Education of the Department of Natural Resources. Great contributions were also made at various stages of the work by the Department's Divisions of Geological Survey, Lands and Soil, Water, Wildlife, Parks and Recreation, Forestry, and Natural Areas and Preserves.

To the many other individuals too numerous to acknowledge here, who contributed in various ways, we extend our appreciation with the hope that the *Guide* may lead, ultimately, to a better understanding and appreciation for the natural environment as well as a cautious approach to eliminating or further altering even seemingly unimportant portions of it.

OHIO COUNTY OUTLINE MAP

IMPORTANT
please read before using this guide

This book was designed originally to give teachers and youth group leaders information necessary to select and plan a field trip or a school camping program. Where possible the information included descriptions of rocks, soils, climate, and topography to help establish their relationship to the plant and animal life of the living communities. Man's historical influence has been added to give further, and important, perspective to visitors' knowledge of the character of the areas.

The updated second edition contains descriptions of numerous new sites not too fragile for more extensive use by families as well as school groups – sites to be explored and, hopefully, from which to gain an appreciation and understanding of the remaining beautiful lands available for study. A family trip should be planned only after examining the material describing an area, in order to make it a more rewarding experience and more effective preparation for or supplement to the understanding gained by school class field trips or camping.

It is imperative that permission be obtained from each property owner or manager to use a site, regardless of category. For private lands and nature preserves, permission is absolutely mandatory. But even for state, metropolitan, county, or city parks, it is important, both as a courtesy and for operational efficiency, that managers know when a class or youth group will be on the premises. In most cases, when permission is requested, arrangements can also be made for facilities or a naturalist's services, trail guides, maps, and road information.

SELECTING THE SITE

It is suggested that the user of the *Guide* first read the descriptions of areas within a reasonable radius, his own county first, then those adjacent or near enough to be considered. The areas described in this guide are all listed in alphabetical order under their respective counties. The true nature preserves are also in alphabetical order under county headings, but in a separate section toward the end of the *Guide*.Some counties have woefully few places available, but Ohio, with its great diversity of localities, offers many opportunities within a reasonable distance.

If the name of an area is known, but not its county location, the index should be examined. The index is composed of names of sites only. Adaptability to curriculum must be determined by locating the area and studying the description material.

AVAILABLE FACILITIES

It is essential to consult the charts near the back of the *Guide* to determine what facilities are available at each site. The charts alone give this information. The facilities listed are those helpful in planning an educational trip and do not include many available recreational accommodations.

TYPE OF AREA

Another piece of important information is on the charts. The areas have been categorized according to type and this is the first item listed. The categories and their abbreviations are as follows:

NATURAL ENVIRONMENT: Abbreviation on chart is NE. Included are a variety of areas suitable for study of physical environment, one or more habitats or communities, pioneer history, prehistory, or Indian lore. These areas may or may not include sites of scenic splendor. All areas listed, even under other categories, have "natural environment" characteristics in addition to the specialized interest. For instance, sites where school camping is indicated as the category are excellent field trip possibilities for natural environment observations.

NATURE PRESERVES: Chart abbreviation is NP. A separate section has been devoted to these very special areas. They are "living museums," to be studied by advanced

students or special small groups. They are usually without facilities. This section should be read for a knowledge of some of Ohio's outstanding remnants of woodlands, swamps, prairies, glacial relict vegetation, and geologic phenomena. The revised *Guide* includes descriptions of a number of the new state nature preserves.

SCHOOL CAMPING: Chart abbreviation is SC. These are camps, outdoor education workshop areas, or nature centers where resident school camping already exists or where owners are willing to cooperate with such programs. Facilities may or may not include winterized sleeping quarters. Since site previews and reservations should be made for use of all such sites, additional information may be obtained at that time.

CONSERVATION EDUCATION AREAS: Chart abbreviation is C. These are sites which provide demonstration areas or illustrate the wise use of natural resources: farms using approved conservation practices (including tree farms and children's farms), zoos, fish hatcheries, nurseries, weather stations, arboretums, reclamation areas, and others. The number has been expanded greatly in or near large cities in order to encourage trips where distance is a restricting factor.

UNDEVELOPED AREAS: Chart abbreviation is U. These are usually public lands, roadless and undisturbed, lands earmarked for future development, or areas retained as green islands for future generations.

CARE OF THE PROPERTY

A necessary part of education is respect and appreciation for the property of others. This includes no littering, no picking or trampling of flowers or other plants, no collection or abuse of animals, and no facilities used unless prior arrangements have been made. It means staying on trails or paths. Rocks may be lifted in a stream to examine life beneath, but they are then to be replaced as before. Salamanders, turtles, fish, frogs, insects, and other animals may be examined if they are released promptly and unharmed.

A TRIP PREVIEW

A careful examination of the area in advance leads to a pleasurable as well as an educational experience. We cannot delineate all the necessary preparations and procedures for a field trip in this volume, but we emphasize the importance of this. (See "Planning and Proceeding with a Field Trip," *Woodlands* [Ohio Forestry Association] May-July, 1970.)

MAPS AND OTHER PUBLICATIONS

The use of maps has been an important consideration in the preparation of this guide. Included are geological, glacial, soils, water, forest, and natural vegetation maps. An explanation is printed opposite each map and should be reviewed in preparation for a site study. In this way the interrelations become clear. Because we now know that the understanding and protection of environment requires a knowledge of soils, drainage, watersheds, depth of glacial deposits or bedrock, the minerals for soil determination and such factors, the descriptions of areas have included this type of information when possible. Further study can be made by using the large maps, county bulletins, and topographic maps available from the Division of Geological Survey, Department of Natural Resources, Fountain Square, Columbus 43224. A publications list will be sent upon request. The writer has drawn heavily on *Water in Ohio* by Dr. Wilbur Stout and associates, as well as county geologic bulletins for information.

For more detailed information on the flora and fauna of Ohio, consult the Publications Center of the Department of Natural Resources, Fountain Square, Columbus 43224; *The Ohio Journal of Science* and other publications of the Ohio Academy of Science, 445 King Avenue, Columbus 43201; and the publications list of the Ohio Biological Survey, 484 West 12th Avenue, Columbus 43210. Valuable teaching techniques under headings such as "What Can You Learn about a Quarry!" or "What Can You Learn at a Museum...a Zoo...a Cemetery?" are described in *The Yellow Pages of Learning Resources*, the MIT Press, Massachusetts Institute of Technology, Cambridge, Massachusetts 02142. (See also selected bibliography at back of book.)

ADAMS COUNTY

ADAMS LAKE STATE PARK

96 acres

On SR 41, north of West Union

Adams Lake State Park is composed of an artificial lake of approximately 47 acres and a large mowed picnic area containing hardwood trees. A small relict prairie occurs here. The dominant vegetation of this dry prairie is prairie dock. Post oak also occurs.

Park Manager
Adams Lake State Park
West Union 45693
(614) 544-3927

BRUSH CREEK STATE FOREST

11,760 acres

On SR 73, 1½ miles west of Rarden

This is an extensive, undeveloped area established in 1928 with the objective of bringing denuded and fire-damaged timberland under forest management. The terrain is hilly with an oak-hickory forest containing wildflowers, rabbits, squirrels, deer, and other wildlife. A fire tower is on the property. The property lies in Adams, Pike, and Scioto counties.

Forest Ranger
Brush Creek State Forest
Route 3, Peebles 45660
(614) 372-3194

DAVIS (EDWIN H.) STATE MEMORIAL

88 acres

On Twp. Rd. 129 approximately 5 miles southeast of Peebles

This tract, of unusual scenic beauty and scientific interest, is one of the nature preserves administered by the Ohio Historical Society. Rugged dolomite cliffs, rich forests and prairie openings give diversity for environmental studies.

The Circle Trail and the South Trail have numbered site markers. The trails may most informatively be followed by using an Ohio Historical Society brochure which contains concise explanations keyed into these signs. The Circle Trail has rich moist slopes covered with a variety of wildflowers in early spring. Redbud, arrowwood, witch hazel, leatherwood, and wild hydrangea are understory shrubs which flourish along the path. Trees include arborvitae, yellow oak, red oak, tulip, and sugar maple.

The cliff faces of resistant dolomite rock provide a habitat for many primitive algae, lichens, and mosses which yield to walking fern, cliff-brake and other ferns as a little more soil filters into the rock crevices. A rare rock plant, *Sullivantia*, known in only a few widely scattered localities in Ohio, grows in these rock pockets also. Native arborvitae, evergreen conifers restricted to alkaline (limestone) soils, have survived along the edges of cliffs like this one since glacial days. On the rocky promontory, plants such as hoary puccoon, tall larkspur, and flowering spurge, typical of the great prairies in the West, are found.

Above the dolomitic rocks is a layer of the Ohio shale. This thin-bedded black shale is not alkaline and the change in vegetation is noticeable. Scarlet, black and white oak, dogwood and sassafras are typical of the acid soil conditions.

The South Trail, scraped bare of forest cover and topsoil during logging operations years ago, shows colonies of red cedar, scrub pine, redbud, and some prairie flowers in the recovery process. Cedar Cave, caused by groundwater solution, and a geologic fault showing rock displacement are special features to be noted on this trail.

Visitors must remain on the nature trails. For brochures contact:

The Ohio Historical Society
Columbus 43211
(614) 466-4663

SERPENT MOUND STATE MEMORIAL

60 acres

On SR 73, 4 miles northwest of Locust Grove

Located on the east bluff of Ohio Brush Creek beyond the boundary of glaciation, this area lies on dolomitic rocks of Silurian age. Of special interest historically, this is an outstanding effigy mound in the shape of a serpent, the largest known mound of its kind in the United States.

One-quarter mile long, with seven deep curves in the heaped-up earth material, the serpent is in the act of uncoiling. In its open jaws lies a small mound representing an egg. Excavations have been inconclusive but some authorities believe it to have been built by the Adena Indians between 1000 B.C. and 400 A.D.

Helpful in interpretation is a museum which also has information and items for sale. The area has much to offer for a multipurpose field trip. Near the effigy is an unusual, world-renowned geologic feature, the cryptoexplosion structure of volcanic origin.

Manager
Serpent Mound State Memorial
Route 4, Peebles 45660
(513) 587-2897

TRANQUILITY STATE WILDLIFE AREA

3,581 acres

Northeast of Tranquility off SR 770

This large acreage, partially wooded with oak-hickory forest, contains several small ponds which provide habitat for furbearers, fish, and waterfowl. Cottontail rabbit, quail,

squirrel, woodchuck, raccoon, muskrat, mink, skunk, and opossum are the principal upland animals. Deer and ruffed grouse may be seen in the forest.

Area Manager
Tranquility State Wildlife Area
Route 4, Peebles 45660
(513) 764-1281

WOODLAND ALTARS
430 acres

20 miles southeast of Hillsboro, access from SR 41

Woodland Altars is located in the beautiful hills of northern Adams County, in the midst of abundant natural and historical resources. The site includes 430 acres of mostly wooded terrain, with several miles of trails giving controlling access to the significant features of the natural communities which comprise the area.

The area abounds in pioneer history and Indian lore and is, as well, the site of a highly controversial geologic feature known as a cryptoexplosion structure. This is a circular area of some 10,000 acres showing a high degree of disturbance considered to be due to either internal volcanic forces or a meteorite explosion. The proximity of the camp to Serpent Mound and Fort Hill adds to its value for outdoor education.

The facilities at Woodland Altars are designed to permit flexibility of use. Camping or school groups have the choice of indoor or outdoor facilities to suit their individual objectives. Retreat and conference groups will find ideal surroundings in the lodge for a successful educational event any time of the year. Families will find the uncrowded solitude of the family camping circle much to their liking. The camp can accommodate both types of groups simultaneously. Of particular interest to schools is the program of outdoor education now offered throughout the school year. A complete staff of teacher-naturalists guides student residents through four days of experience in environmental interpretation.

Rates for meals, lodging, and resident camps, available upon request, are kept at a minimum to provide a service to groups seeking a location for meetings.

Resident Manager
Woodland Altars
Route 4, Peebles 45660
(513) 588-2105
588-2100

ALLEN COUNTY

DEEP CUT PARK
6 acres

On west side of SR 66 on the county line near Spencerville

Deep Cut is a 6,000-foot-long excavation through a glacial moraine, which served as a part of the Miami and Erie Canal linking Cincinnati to Toledo. Water remains in this section of the canal, adding to the site's beauty and ecological interest.

Deep Cut Park is a rest area primarily but provides, in addition, trails on the high east bank and along the original towpath. A historical marker and plaque designating the site as a National Historic Landmark emphasize its value as a part of Ohio history.

Ohio Department of Transportation
Division of Highways, District No. 7
Sidney 45365

FORT AMANDA GUN CLUB AREA
148 acres

On Mills Rd. between SR 117 and Fort Amanda Rd.

This is a hunting preserve for club members, but if proper arrangements are made in advance with the manager, field trips may be conducted. The entire area is maintained for wildlife protection, with hunting and fishing in season permitted for members only. Pheasant, rabbit, and quail are abundant. Three small lakes and 60 acres of mixed forest types and grassland provide food and cover for a wide variety of wildlife.

Manager, M.J. Zapp
Fort Amanda Gun Club Area
Route 4 Mills Road, Buckland 45805
(419) 657-2275

JOHNNY APPLESEED METROPOLITAN PARK DISTRICT
202 acres

The park district was organized recently in order to preserve natural areas and provide enjoyment and appreciation of natural beauty for the people in the Criderswille area. Land for two parks has been acquired, picnic facilities and hiking trails developed. Both parks have wooded areas, an abundance of early spring wildflowers, and water areas.

Heritage Park in Shawnee Township, entrance on Reed Road, has a shelter house and rest rooms. Teddy Bear Park in Bath Township on SR 25 has picnic facilities, an outdoor classroom, and two ponds at the present time. Either site is quite adequate for beginning field trips for younger classes where the relationships of water, soil, plants, and animals may be introduced.

Commissioner
Johnny Appleseed Metropolitan Park District
P.O. Box 2006 Crideraville 45806
(419) 991-1311

LIMA LAKE

85 acres of water 3½ miles of shoreline

On Findlay Rd., west of Lima, access through parking lot on Findlay Rd., and from Metzger Rd. during low water in the Ottawa River

Lima Lake, built in 191-, is an upland reservoir which was formerly relied upon heavily for the city water supply. For outdoor education purposes this area is more advantageous than Lost Creek Reservoir because there are several acres of woodland on the south edge and the Ottawa River flows by one corner.

Numerous species of trees and wildflowers may be identified in the woodland area. Comparative water chemistry study of the river and the reservoir, as well as the geological or physical reasons reservoirs are necessary for water supply, could be challenging projects for high school students in ecology, physics, chemistry, or earth science.

The use of the reservoir and the surrounding territory for any purpose is restricted, and teachers will find it necessary to work closely with the Director of Utilities.

Director of Utilities
Municipal Building
P.O. Box 1198, Lima 45802
(419) 229-2891

LOST CREEK RESERVOIR

112 acres

1 mile east of Lima on High St. Rd.

This is a large water supply upground reservoir owned by the city of Lima. The reservoir contains many fish species, and has a limited shoreline growth of cattails. During spring and fall, migrating waterfowl may be observed using the lake; these are often canvasback, redheads, scaup, and other diving ducks. Other common visitors are Canada geese, blue and snow geese, mallards, and black ducks. Lost Creek flows adjacent to the reservoir on the east.

Because the reservoir is close to Lima's residential area, no extensive woodland or unaltered grasslands are present.

Director of Utilities
Municipal Building,
P.O. Box 1198, Lima 45802
(419) 229-2891

SWINGING BRIDGE NATURE PRESERVE

104 acres

One-half mile north and one-quarter mile east of the Bluffton College Campus

The Swinging Bridge Nature Preserve has been developed as a field laboratory for training students in ecology, botany, and zoology. The college personnel, realizing the importance of outdoor education for school children, invite groups to study the natural world under the guidance of

trained naturalists. The area also serves as a sanctuary for protection of wildlife and native plants.

The rich variety of habitats includes an eight-acre pond with marshes and an island; 20 acres of woodland, flood plain, and cropland. An old orchard and black walnut grove provide additional learning experiences.

A renovated century-old house, built by early Swiss settlers, may be used as a conference center or weekend retreat for small groups. In addition to a library and exhibits, the education center provides space for lectures, discussions, and films. The area lends itself well to interpretive hikes and the study of many birds, mammals, reptiles, fish, and plants.

Director
Swinging Bridge Nature Preserve
Bluffton College, Bluffton 45817
(419) 358-2175 or 358-8015

WINONA LAKE

50 acres

On Breese Rd. in Shawnee Township

Winona Lake is a plot developed with the help of the Soil Conservation Service primarily for recreation. Hiking trails lead to the 16 acres of mixed hardwood trees as well as to a sizeable lake, grasslands, and croplands. Shorebirds are seen at the lake; other animals and plants may be found for observation. No charge is made for school groups.

Mrs. Howard Wellman
5675 Breese Road
Route 4, Cridersville 45806

ASHLAND COUNTY

CAMP JUDSON HILLS
(Ohio Baptist Camp)
260 acres

On Co. Rd. 187, off SR 3, 5 miles south of Loudonville

Camp Judson Hills lies on unglaciated rolling hills along the Mohican River. Approximately 80 acres in the river basin are devoted to a conference center which contains a beautiful winterized lodge overlooking a three-acre lake. Five modern and winterized cabins and shower buildings are scattered on the hillside back of the lodge.

On top of the hill a large tract of woodland and meadow comprises a frontier camp area. Two well-marked nature trails have been established which reveal the rock strata of sandstone and shale, a multitude of birds, and plants - including beech-maple, oak-hickory associations with club mosses, a wide variety of wood and rock ferns, lichen and fungi. The food provided for resident camping is reputed to be outstandingly good.

Bert Gilmore
Ohio Baptist Convention
Box 386, Granville 43023
(419) 994-4657

CAMP WESLEY
120 acres

Off SR 97 halfway between Butler and Perrysville, Hanover Township

Camp Wesley is situated on and between two hills near the shore of Pleasant Hill Lake. Access to the lake is across land owned by the Ohio Department of Natural Resources and to be developed for park purposes. It is adjacent to new Mohican State Park Lodge.

The area has been permitted to return by succession to natural vegetation. Thirty-two acres upon which the buildings stand contain many trees and shrubs, wildflowers and birds. Sandstone and shale strata as well as glacial till of the Wisconsinan age tell the geologic story.

Pleasant Hill Dam, with an unusual morning-glory spillway, is within easy hiking distance. The property is adjacent to the Mohican State Forest and State Park, which furnish more natural features for study. The attractive lodge is winterized.

Manager
Camp Wesley
Route 2, Perrysville 44864
(419) 938-7151

CHARLES MILLS LAKE
Land - 2,050 acres Water - 1,350 acres

On SR 30 and 430, 8 miles east of Mansfield

This extensive water area and the surrounding land are part of the flood control and recreation program of the Muskingum Watershed Conservancy District. The beautiful lake, with wooded shores, narrow bays, and long winding peninsulas, provides innumerable areas for the study of bird, plant, and animal life of great variety.

Manager
Charles Mills Lake
Route 4, Mansfield 45144
(419) 368-7171

HICKORY OAKS CAMPGROUND
123 acres

6 miles east of Butler and south of 97 in the southwest corner of the county

Although this property has been developed primarily for recreational purposes it is rich in Indian and natural history. Wet-weather springs and two lakes provide water habitats; 15 acres of woods contain oak, hickory, dogwood trees, shrubs, wildflowers, and animals. There are farm animals also on the property. Land lies partially in well-weathered Illinoian glacial deposits. Students are invited free of charge during spring and fall months.

John and Elizabeth Bellan
Route 2, Butler 44822
(419) 883-3330

HILLSDALE OUTDOOR EDUCATION AREA
120 acres

Surrounds Hillsdale High School at Hayesville just off SR 30

This fortunate school has a large area of land available for immediate use and future development. Approximately 15 acres of woods provide many trees, flowers, and shrubs for study. Future plans include a pond for biological research and two large shelters. Facilities are available during school year only.

Director
Hillsdale Outdoor Education Area
Route 1, Jeromesville 44840
(419) 368-6851

MOHICAN STATE PARK AND STATE FOREST
Park - 1,294 acres Forest - 4,091 acres

On SR 97 east of Bellville, and SR 3 south of Loudonville

Mohican State Park is adjacent to and surrounded by the larger acreage of the Mohican State Forest. Both tracts are outstanding in their beauty and provide numerous field trip possibilities.

Within the park is the Lyons Falls hiking trail with abundant forest vegetation, wildflowers in season, a great Black Hand sandstone overhang, and rich local history. A marked nature trail on the north side of Clear Fork is un-

usually picturesque and informative. Paths lead along the gorge on either side. All trls offer equally exciting opportunities for studying botany birds, and geology. The stream is a good canoe trail, offeng yet another way to observe the relationship of physicaenvironment, plant and animal life.

The forest was establined in 1928 to guard precious scenic areas. Oak-hickory and beech-maple forests, extensive pine plantations ad native pine and hemlock cover the hilly terrain and steep slopes. A fire tower and a post and small pole peeling anstre.'ment plant are available for additional forestry study A pa.t of the forest added in 1948 has been designatecthe M'morial Forest as a living tribute to Ohio serviceme. For a n'ore detailed description of Clear Fork Gorge see se Nature Preserve section of this book.

In addition to trails an innumerable picnic and camping sites, a small nature centr is adjacent to the service center. In the summer a full-tire interpretive naturalist offers an education program free ocharge.

Park Manager
Mohican State Park
Box 21 A, Route 2, Loudonville 44842
(419) 994-4290

Forest Ranger
Mohican State Forest
Route 2, Perrysville 44864
(419) 938-7505

PLEASANT HILL LAKE

Land - 1,490 ares Water - 850 acres

On SR 95, 7 miles westof Loudonville

This lake and dam re a part of the Muskingum Watershed Conservancy District program initiated in 1934 for flood control and recration. The earthfill dam has an unusual spillway of morning-glory design.

It is located almostexactly on the line dividing glaciated and nonglaciated land The low, rolling land north of the dam is in sharp contrat to the deeply eroded gorge of the Clear Fork on the soith. The forests, marshes, and rocky cliffs on the lake shore provide habitats for a wide variety of wildlife and natural environment study. This is also the site of the new Mohican State Park Lodge.

Manager
Pleasant Hill Lake
Route 2, Perrysville 44864
(419) 938-7884

WILLIS WOODS

42 acres

On Twp. Rd. 2156, 1 mile east of SR 603, south of Mifflin

Willed to the Ohio Forestry Association as a wooded retreat, this secluded natural area lends itself well to field trips or extensive ecological research.

This site is almost completely wooded except for a small area around the cabin. Mixed hardwoods of maple, oak, beech, and numerous other species cover the hillsides, some stalwart specimens of considerable age, others indicating recent regeneration and planting. A 20-year-old pine plantation creates a different woodland habitat. Wildflowers are abundant in the spring, both in the woods and forest openings. The area contains many types of ferns and mosses, especially where seeps provide a moist environment.

A small winterized lodge stands near the second highest point in Ashland County. The property is reported to be

near the site of the Copus massacre, a tragic attack on one of the most highly respected white settlers by his previously friendly Indian neighbors. The Copus monument, erected in memory of the Copus family, is situated near Mifflin.

The Ohio Forestry Association
Neil House, Columbus 43215
(614) 221-6671

YOUNG'S SAND AND GRAVEL OPERATION

300 acres

2 miles west of Loudonville on SR 39

Earth science classes may wish to use this extensive operation both to study the kames and glacial outwash deposits along the Mohican River and to collect a wide variety of igneous and metamorphic rocks deposited by the glacier. The company recommends visits in the spring and fall months.

Young's Sand and Gravel Co.
Route 2, Loudonville 44842
(419) 994-3040

ASHTABULA COUNTY

BEAUMONT SCOUT RESERVATION

1,200 acres

On SR 45 at Rock Creek

This extensive reservation lies in an area of flat to gently rolling topography with a few deep ravines cut into the underlying Ohio shale. The Grand River flows through the western part of the property.

Four artificial lakes, open farmland now in grass and shrubs, and wooded areas provide diversity in habitat for many plants and animals. Oak-hickory as well as beech-maple forests and their plant associations can be studied from the hiking trails. The camp, used as a training center, has winterized lodge and dormitories.

Director of Camping
Greater Cleveland Council
Boy Scouts of America
Woodland and East 22nd Street, Cleveland 44115
(216) 861-6060

BUCCANEER CAMPSITES

270 acres

On SR 307, 4 miles southeast of I-90 and SR 45

Most of this campground, designed for recreation activities, is wooded. The forest was timbered many years ago and now contains sizeable hardwoods and natural succession plants.

Mill Creek, relatively unspoiled, flows through the length of the farm, giving some relief to the flat land. Migratory songbirds and waterfowl, deer, mink, raccoon, opossum, beaver, and woodchuck are animals seen at least occasionally. Wildflowers are plentiful in the spring. Rental canoes and five miles of hiking trails provide access to desirable study areas.

Richard J. Buchan
Route 2, Jefferson 44047
(216) 576-2881 or 576-1175

CAMP KENISEE

170 acres

On Creek Rd. near Jefferson

This is a private campground used primarily for recreation. However, the area has considerable woodland containing oak, ash, maple, elm, hickory, walnut, dogwood, white pine, and hemlock. Wildflowers are abundant in season.

Glacial deposits and bedrock in the streams provide material for geologic studies. The woodland and forest edge are good habitats for deer, rabbit, woodchuck, and many birds. A barn is available for shelter. Hayrides may be arranged.

Kenneth Carroll
Creek Road, Route 2, Jefferson 44047
(216) 576-1176

CAMP KOINONIA

250 acres

On Cold Springs Rd., Harpersfield Township

Camp Koinonia is a Baptist Association camp serving Akron, Ashtabula, and Cleveland. It contains an excellent selection of both deciduous and coniferous trees, most of the typical wildflowers and shrubs, and the small wild animals associated with such an environment.

Several streams converge within the camp and together with three ponds provide excellent sites for water life and geologic studies. The camp can accommodate up to 100 in tents in May and September and up to 60 in winterized facilities during colder months. Heated outdoor swimming pool available in May and September.

Director and Manager
Camp Koinonia
6810 Cork Cold Springs Road, Geneva 44041
(216) 466-1278

CAMP LUTHER

66 acres

On SR 531, 5 miles west of Conneaut

Camp Luther is on a beautiful 90-foot bluff overlooking Lake Erie. The site is heavily wooded and a brook flows into the lake, all of which contribute to its scenic quality.

The land lies in the glaciated Lake Plain province near the beach ridge of old Lake Warren. The underlying rocks are sandy shales and thin, hard sandstones of the Chagrin formation, Devonian in age. These are exposed in the bluff and along the stream. The woodland is covered with mixed hardwoods, no species particularly dominant. Wildflowers and small animals are present.

The camp has many comfortable cottages, a rustic lodge and dining hall, playgrounds, picnic areas, and chapel. It is used extensively for family camping. School camping or field trips may be arranged.

Rev. Kenneth Larkin, Manager
Camp Luther
Route 2, Mansfield 44903
(419) 589-7406

CAMP UNALIA

190 acres

On SR 534 in Trumbull Township

Unalia is a relatively new Girl Scout camp with winterized buildings. More than half of the area is covered with mixed hardwoods on flat to gently rolling topography with a few deep ravines and high overlooks. Trumbull Creek flows along the north boundary revealing bedrock and glacial deposits. Open areas are flat and have poor drainage.

Lake to River Girl Scout Council
Niles 44446
(216) 652-5877

CAMP WHITEWOOD
230 acres

One-half mile south of SR 322 and 1½ miles west of SR 534 near Windsor

Regarded as one of the outstanding conservation education facilities in northeast Ohio, Camp Whitewood is generally used by area schools during May and June. However, arrangements can also be made for September and October.

The camp is located in Warner's Hollow, deeply cut through Devonian shales by a tributary of the Grand River, exposing large sections of the rock layers. The large acreage provides three lakes and several streams for wildlife study; woodlands for tree and plant work. Buildings include dining hall, sleeping cabins, and staff quarters.

Frank R. Wilson, Executive Director
Route 1, Box 74, Windsor 44099
(216) 272-5275

GENEVA STATE PARK
682 acres

On SR 534 and Lake Erie

This state park is primarily natural beach sand with some stands of mixed hardwoods of considerable size and some old fields. Beach plant succession and shore-water relationships may be observed. It is a good area for shorebirds but not for waterfowl due to the lack of cover.

Park Manager
Geneva State Park
Box 429, Geneva 44041
(216) 487-5488

NEW LYME STATE WILDLIFE AREA
529 acres

1 mile east of South New Lyme off SR 46

The state maintains this property for forest-wildlife management. The area is flat and poorly drained. Waterlogged soils persist until late spring or early summer. Many acres of woodland are representative of a typical northeastern Ohio swamp forest composed of elm, ash, soft maple, pin and swamp white oaks. Grouse, woodcock, squirrel, and deer are common, with woodcock nesting on the area. Warblers are abundant during spring and fall migration periods.

Division of Wildlife District 3 Office
912 Portage Lakes Drive, Akron 44319
(216) 644-2293

ORWELL STATE WILDLIFE AREA
193 acres

2 miles north of Orwell on east side of SR 45.

This area is characteristically flat and poorly drained. A pond provides fishing and offers nesting sites to wood ducks. Occasionally black and mallard ducks are observed.

Typical swamp forest trees such as pin oak, swamp white oak, and maples are dominant. Grouse and squirrel are common.

Division of Wildlife District 3 Office
912 Portage Lakes Drive, Akron 44319
(216) 644-2293

PYMATUNING STATE PARK
8,499 acres

Between US 6 and 322 on the Ohio-Pennsylvania border

Pymatuning Lake is an extensive reservoir covering about 17,000 acres, of which 3,580 are in Ohio. The extensive acreage surrounding the artificial lake provides many habitats for plants and animals. The topography is relatively flat with swamp forest in the low areas. Slight elevations provide upland conditions for beech-maple woodland. The shoreline is excellent for observing waterfowl and shorebirds. A nature program is conducted during the summer.

Park Manager
Pymatuning State Park
Route 1, Andover 44003
(216) 293-6030

ATHENS COUNTY

BUCKEYE TRAIL
8 miles

From Burr Oak State Park to Murray City

The trail enters Athens County near the head of Burr Oak Lake and leads south through second growth woodlands and pine plantations. It crosses the county westward through Trimble State Wildlife Area, which is old farmland returning to forest land through succession and planting. A branch of Sunday Creek is crossed, a stream which is responsible for the eroding of the Pennsylvanian rock formations below. The walking is good, the countryside scenic.

For maps and further information contact:

Buckeye Trail Association, Inc.
P.O. Box 254, Worthington 43085

GIFFORD STATE FOREST

320 acres

1 mile northeast of Shurpsburg on SR 377

Gifford Forest lies in the northeast part of the county on wooded hillsides and ravines cutting into sandstones and shales of both Pennsylvanian and Permian age. The area was a gift of the Selby heirs, presented to the state in 1950.

The woodland is covered with oak-hickory, maple forest. The wildflowers and animals typical of southeastern Ohio contribute to an interesting natural environment. Of interest, also, is a seed orchard which was started for production of high quality tree seed.

Forest Ranger
Gifford State Forest
Route 2, Chesterhill 43728
(614) 554-6617

STROUDS RUN STATE PARK

2,606 acres

Off US 50 east of Athens

Strouds Run, now dammed to form lovely Dow Lake, had formerly eroded its way through sandstones and shales of Pennsylvanian age to create a beautiful scenic area. The park around the lake is mostly wooded, of oak-hickory forest type. Many kinds of wildflowers, shrubby plants, and small wild animals add to the study possibilities of the area. A naturalist is on duty from mid-June to Labor Day.

Park Manager
Strouds Run State Park
Route 3, Athens 45701
(614) 592-2302

TRIMBLE STATE WILDLIFE AREA

2,091 acres

On SR 68, west of Glouster

Located in the scenic, extreme north central part of the county, this area is rich in wildlife habitats. The topography is hilly, consisting of deep, moist ravines and dry, rounded ridgetops. American beech, sugar maple, red oak, and tuliptrees grow in the ravines and on the lower slopes. Mixed oak-hickory stands are characteristic of the drier ridges.

Various species of wildflowers typical of the eastern deciduous forest are abundant in season. These include trillium, hepatica, rue anemone, bloodroot, and cut-leaf toothwort. Wildlife that can be seen or hunted in season on the area includes gray squirrel, ruffed grouse, white-tailed deer, raccoon, and cottontail rabbit. Tour arrangements should be made well in advance.

Division of Wildlife District 4 Office
360 East State Street, Athens 45701
(614) 593-6933

WATERLOO STATE WILDLIFE EXPERIMENT STATION

1,250 acres

At the junction of SR 56 and 356 in the west central part of the county

The state maintains this reserve and laboratory for forest game research purposes. The land lies within the central hardwood deciduous forest types of oak-hickory and beech-maple. The area is characterized by steep, dry hillsides dissected by narrow, moist ravines, creating a rough and broken topography in the Pennsylvania age sandstones, shales, coal beds, and limestones.

The many developed trails, the facilities, and the laboratory displays concerning forest research and management make this area a particularly choice one for field trips.

Groups may be able to view gray and fox squirrel, grouse, turkey, deer, and many songbirds. A colored slide talk and guide service may be requested with advance registration. A fire tower provides an additional conservation study facility.

Manager
Waterloo State Wildlife Experiment Station
Route 1, New Marshfield 45766
(614) 664-2745

WAYNE NATIONAL FOREST

Dispersed among 12 Ohio counties are 162,000 acres of land set aside as Wayne National Forest. In Athens County the acreage is concentrated in the north, northwest, and east parts. Snake Ridge in the extreme west, Utah Ridge near Doanville in the north central section, and Burr Oak in the east constitute the wooded areas in Athens County. Much of the territory is exhausted farmland, originally forest, now being reforested for timber, watershedprotection, and recreation.

The area has been and is still being heavily mined for coal. Present mining is primarily by stripping. This activity is the result of reserved or outstanding mineralrights at the time the surface was sold to the United States.

Wildlife is recognized as a primary resouce, and the Forest Service carries on an active program of improving the forest habitat, with cooperation from the Division of Wildlife of the Ohio Department of Natural Resources. This activity creates many acres of woodland suiable for the study of plant and animal associations.

There are two wild turkey management areas, where this bird has been reintroduced and established with assistance from the Division of Wildlife. They are the Irish Run-Jackson Run unit in Washington County andPhillips Knob unit in Lawrence County.

Among the projects carried out are the development of ponds and the creation of openings for use by wildlife. Regulated timber harvesting is also practiced, and various-sized cutting areas create temporary wildlife openings.

A part of the forest known as Buffalo Bats, located in Dover Township, is on heavy calcareous clay soil and contains typical prairie plants. These include bigand little bluestem, blazing star, and post oak. The area is less than one acre and is surrounded by oak forest on typical sandstone soil. It has long been used by Ohio University botany classes.

District Ranger
U.S. Forest Service, Athens 45701
614) 593-7273

AUGLAIZE COUNTY

CAMP ST. MARY

105 acres

At the east end of Grand Lake St. Marys on SR 364

Camp St. Mary, with its buildings clustered on the waterfront of a large lake, offers a limited natural environment. Some trees remain from the earlier maple forest; some have been planted. No extensive woodland, however, shelters wildflowers or animals. But the water habitat attracts many shorebirds and waterfowl, and provides opportunity to observe plant and animal life associated with the shore. A large, winterized lodge accommodates 80 people; dormitories, cabins, and other facilities are available.

Manager
Camp St. Mary
Route 2, St. Marys 45840
(419) 394-2151

FORT AMANDA STATE MEMORIAL

10 acres

9 miles northwest of Wapakoneta on SR 198

Situated along the Auglaize River, this plot is significant primarily for historical and esthetic reasons. However, because it is rather heavily wooded with native Ohio trees of beech-maple association, it may well be used for a multipurpose field trip to study natural history and human ecology.

Originally the site of an Indian Village, Fort Amanda was built in 1812 as one in a system of fortified supply depots in Ohio. A simple obelisk was erected by the state in 1915 in memory of the men who served and died there.

No reservations are required, as the site is open to the public. For further historical information:

The Ohio Historical Center
Columbus 43211
(614) 466-4663

HOGE WOODS

41 acres

One-half mile southwest of New Knoxville on SR 219

The Hoge Lumber Company is managing these woods for timber production. Selective logging is practiced; only trees which show indications of dying or degradation are cut. Natural reforestation continuously takes place from seedlings after trees are removed. There are excellent specimens of white, bur and red oak, ash, and hickory, with some beech and maple in association. Less common species -- basswood, maple, sycamore, and dead elm -- are found in the forest also.

Many understory wildflowers typical of neutral soils grow in abundance. These include jack-in-the pulpit, trillium, hepatica, violet, swamp lily, wild geranium, spring beauty, and others. Squirrel, rabbit, muskrat, and other small game animals, as well as deer, are sighted. This is also a good site for forest and edge-of-the-forest birds.

A word of caution is given by the owner regarding poison ivy. He is willing, nonetheless, to share this lovely woods with appreciative groups.

Hoge Lumber Company
New Knoxville 45871
(419) 753-2263

LUNZ OR AUGLAIZE HERONRY

10 acres

South of Wapakoneta off Co. Rd. 25A near Fryburg

A small woodland near Lake St. Marys, surrounded by farmland, has been adopted by a colony of great blue herons during their months in the north. Often erroneously called a crane, this large bird with a wingspan of about six feet is easily distinguished by the fact that it flies with its head drawn back to the shoulders. Numerous nests, large platforms made of sticks in the tops of trees, are found in the woods. The bird has telescopic sight and feeds along the edge of a body of water. Presumably, proximity to Grand Lake St. Marys makes nesting in the Lunz woods feasible.

Access to the beech-maple forest is difficult and arrangements must be made well in advance to enter the property. Bird activity can be watched from the road from mid-March to late August.

Ms. Norma and Edith Lunz
Box 64, Wapakoneta 45895
(419) 738-3318

POHLMAN WILDLIFE HABITAT

25 acres

On SR 198 on the Auglaize River near Fort Amanda

This small area of woodland and natural succession or reforested farmland is maintained as a wildlife sanctuary by the owners. The trees are characteristically oak-hickory association, some beech and maple, with an abundance of understory wildflowers in the spring.

Nesting birds, including Canada goose on the river in spring and numerous wintering birds, may be studied. Trees and shrubs that will attract birds have been planted to increase the number. A wooded ravine was dammed several years ago and provides water habitat for plants, fish, turtles, and frogs.

Mr. & Mrs. Hugh Pohlman
Route 4, Cridersville 45806
(419) 657-6915

ST. MARYS STATE FISH HATCHERY

71 acres

At the east end of Lake St. Marys

Almost 52 acres of this area are devoted to rearing and holding ponds, a complete water system and jar hatchery building. This fish farm is used primarily for the production of largemouth bass, but it produces all the northern pike used in Ohio's stocking program. Breeder northern pike are held for stripping and muskellunge are reared to breeder size.

Typically, the area is also valuable for bird study. A large variety and number of waterfowl and shorebirds may be found during fall and spring migration. Canada goose, mallard, and smaller numbers of other waterfowl nest in the area.

The management encourages visitation for viewing fish from March through September; for birds, all months of the year. Grand Lake St. Marys State Park is nearby.

Superintendent
St. Marys State Fish Hatchery
St. Marys 45885
(419) 394-5170

BELMONT COUNTY

BARKCAMP STATE PARK

1,121 acres

South of I-70 a few miles west of St. Clairsville

Belmont Lake, approximately 117 acres in area, is surrounded by 1,004 acres of park land. Situated in the maturely dissected sandstone and shale strata of late Paleozoic deposition, the area has considerable topographic relief.

Part of the extensive acreage contains oak-hickory woodlands, while part shows old field succession from earlier farming practices. This is particularly noticeable on the uplands. Together with the lake, the area thus provides a wide variety of habitats for studying plant and animal life.

Park Manager
Barkcamp State Park
Route 1, Belmont 43718
(614) 484-4064

CAMP COONEY

58 acres

At Lloydsville 1½ miles west of the Ohio University Branch exit of I-70

A recreation area primarily, Camp Cooney consists of natural growth woodland undisturbed since 1935 and several pine plantings. An early carriage house shows handhewn logs and peg construction. Facilities are available for a lunch period, an attractive feature since this site is only 10 miles from Dysart Woods. No fee is charged to teachers or youth group leaders.

Roberta Hagmaier
Route 1, Camp Cooney, St. Clairsville 43950
(614) 695-0504

CAMP PIEDMONT

40 acres

In the northwest corner of the county

Camp Piedmont is a 4-H camp located on the shore of Piedmont Lake. The area is heavily wooded with beech-maple and oak-hickory forest types. Hiking trails give an opportunity to study geologic features and many kinds of wildlife habitats. Facilities include a dining hall and winterized sleeping cabins.

Area Extension Agent
4-H Area Extension Center
59 N. 7th Street, McConnelsville 43756
(614) 695-1455

PIEDMONT LAKE

Land - 4,330 acres Water - 2,270 acres

On US 22 and SR 800

A beautiful lake winding through a portion of the Stillwater Creek watershed was created by placing a dam in

Harrison County near Piedmont. The extensive land area surrounding the lake lies beyond the boundary of glaciation in the highly eroded province known as the Allegheny Plateau. The resistant rocks underlying the area are the limestones, sandstones, and shales of Pennsylvanian age.

The lake shores are heavily and almost completely wooded. The hills are covered with beech-maple and oak-hickory stands. Many acres of pine plantation are a result of reforestation for erosion control, particularly along the lake shore.

Picnic facilities are available at the dam and boat livery as well as at the roadside park on US 22. Camping facilities are found only at the boat livery. A portion of the Buckeye Trail follows the lake south on the west side.

Muskingum Watershed Conservancy District
1319 Third Street, NW, New Philadelphia 44663
(216) 343-6647

RAVEN ROCKS

100 acres

Near Beallsville, 20 miles south of I-70

Raven Rocks is a group of three rugged ravines, given this name because ravens once nested there. The area has been established as a scenic and historic site for hiking and nature study. Several features bear such names as Devil's Den, Old Woman's Cave, and Bear's Den.

Besides the three spectacular cliff and ravine areas, and waterfalls in the winter and early summer months, many species of wildflowers, trees, and wildlife will interest the visitor. White-tailed deer, once gone from the valley, have returned.

Raven Rocks, Inc.
Route 1, Beallsville 43716
(614) 926-1705

UNION SCHOOL LAND LABORATORY

50 acres

At the intersection of I-70 and SR 149

This fortunate school has a comparatively large acreage to study and develop for an understanding of wildlife habitats and behavior. Two farm ponds have been constructed. Several acres are in forest, providing an abundance of wildflowers and animals.

Manager, Union School Land Lab
Route 1, Belmont 43718
(614) 782-1181

BROWN COUNTY

BUCKEYE TRAIL

9 miles

The trail crosses the north end of the county passing through Fayetteville

The trail touches the northern boundary of the Indian Creek State Wildlife Area. Many ponds and marsh lands in this area attract a variety of waterfowl and shorebirds. Limited facilities are available here.

The trail leads across almost flat farmland to Fayetteville. The area is underlain with the Richmond formation, rock strata of the Ordovician age. To be noted along the streams are the typical plant communities, the evidence of Illinoian glacial till, and the mixture of silt, sand, gravel, and debris from the thin limestones in the valley fill.

The blue trail blazes show the way through the town of Fayetteville, then across the Little Miami River, East Fork, and along country roads toward Edenton.

For maps and further information contact:

Buckeye Trail Association, Inc.
P.O. Box 254, Worthington 43085

GOOSE RUN VALLEY

10 acres

On New Hope-White Oak-Sturim Rd. west of Goose Run Bridge

A deep ravine formed by the headward erosion of Goose Run, a tributary of the beautiful White Oak Creek which forms similar topography, offers an excellent site for ecological studies. The exposed rocks are Ordovician limestone and shale, interesting in their formation and erosion patterns, but abundantly rich in the fossils typical of their formations.

The slopes are covered with the hardwoods typical of the beech-maple association. Blue ash, found in limestone areas, grow in the woodland. The site was grazed, but some wildflowers and reproduced hardwoods are in natural succession.

Goose Run itself provides good study possibilities. There is some silt pollution, but it is relatively pure as it flows through limestone bedrock. Typical riffle vertebrates and invertebrates may be found. Red-backed, long-tailed, and two-lined salamanders are common, and pools hold fair to

large populations of small fis such as darters, minnows, and sunfish.

Permission to visit the property or do any collecting must be obtained from the owner.

George P. Courts
oute 2, Georgetown 45121
(513) 444-2872

GRANT LAKE STATE WILDLIFE AREA

412 cres

On SR 68, 3 miles south of Mt. Orab

Primarily a fishing area, this property has 200 acres of water. Studies might be made of plant and animal associations on the shore and water's edge. Spring and fall migrations bring ducks and shorebirds, which include rail and gallinule during fall migration.

Division of Wildlife District 5 Office
Route 3, Xenia 45385
(513) 372-7668

GRIFFITH FARM

195 acres

At the junction of Camp Run and Day-Hill Antheim roads east of Georgetown

This farm is recognized as an outstanding study area for three reasons. First, it is commended by the Soil Conservation Service and others as an efficient farm operation specializing in a grade-A dairy and burley tobacco production. Second, it has diversified habitats including permanent pasture, hay fields, cultivated land, natural succession areas, a farm pond, free-flowing and intermittent streams, and ungrazed woodland. Third, environmentally sound methods for disposing of animal wastes are used.

The farm adjoins Straight Creek, which flows directly into the Ohio River. Slope varies from flood plain to ridgetops with one steep woodland area covered with sugar maple, Ohio buckeye, white oak, hickory, and other species. Near one ridgetop a small gorge has been dammed to create a pond. Small streams have cut deeply into the Ordovician bedrock, exposing many fossils.

The Griffith farm has been producing tobacco since its early settlement days. Milk production with grain and hay for feeding is now the larger operation. The 60-head dairy herd is registered Holstein. The entire dairy complex is constructed over concrete and includes a free-stall loafing shed and auger feeding system for silage. Manure handling is facilitated by a covered manure storage pit which has a three-month capacity. Liquid waste is handled by a diversion system.

Studies of this well-managed, conservation-oriented farm may be arranged with the owner.

Wayne L. Griffith
Route 2, Georgetown 45121
(513) 378-3758

INDIAN CREEK STATE WILDLIFE AREA

1,540 acres

In the northwest extension of the county off SR 5, 1 mile east of Fayetteville

Rolling hills and swamp "flats" in the older Illinoian glacial end moraine mark the topography of this section of protected land. Bedrock from the Ordovician period of Paleozoic age is exposed in some stream beds. Wooded areas are primarily oak and hickory, and the characteristic pin oak profile is frequently seen. There are many ponds on the area, and wildlife abounds in the form of rabbit, bobwhite quail, fox and gray squirrel, raccoon, muskrat, skunk, opossum, waterfowl, woodcock, and a wide variety of shorebirds.

Area Manager
Indian Creek State Wildlife Area
Route 1, Fayetteville 45118
(513) 875-4935

MT. ORAB OUTDOOR EDUCATION CENTER

8 acres

On SR 32 on west side of Mt. Orab

Realizing that nature is where you are, an enterprising and dedicated faculty member and students of this school created their own outdoor laboratory on school property surrounding the buildings. The school complex was constructed on flat fields formerly in soybean and corn, with poorly drained soils of limy clay loam glacial till of Illinoian age. The low permeability of the soil is best met by surface drainage, so the first important contribution to the laboratory was a large pond which helps to drain the area. The underlying Ordovician limestone rock was used for riprap in the drainage channel and to build an outdoor classroom in the shape of an amphitheater.

A few pin oaks, which tolerate wet feet, remain on the school yard, but the major vegetational study is along fencerows and in a wildlife area where plants have been left growing to provide food and protection and to illustrate the principle of natural succession.

With limited resources, the school has access to a number of habitats which can be explored by means of a descriptive nature trail guide. For a guide and further information contact:

Outdoor Education Director
Mt. Orab Middle School
Western Brown Local School District
Mt. Orab 45154
(513) 444-2505

OHIO RESEARCH AND DEVELOPMENT CENTER

260 acres

On US 62, 4 miles north of Ripley

Agricultural research, soil and water conservation practices, and wildlife protection methods constitute the major part of the program conducted on this site, located in the southern tip of Brown County on the edge of glacial till and nonglaciated soils. Research projects include production of tobacco, fruit, beef cattle, and various forages.

Visitation in summer and fall months only.

Manager, ORDC
Route 1, Ripley 45767
(513) 392-2684

BUTLER COUNTY

BUTLER COUNTY PARK DISTRICT

The purpose of the parks and the preserves of the Butler County Park District, containing over 875 acres of forest lands, recreation areas, fishing streams, and boating waters, has been to preserve and restore natural areas for present and future generations. Progress toward this goal has been made on a very modest budget. Many parts of the park program are yet to be developed. Each park is described with specific relevant information. Each has available facilities indicated on the chart at the back of this guide. For maps and reservation

Director-Secretary
Butler County Park District
2200 Hancock Avenue, Hamilton 45015
(513) 867-5835

CRAWFORD HOME AND WOODS
5 acres

2200 Hancock Ave., Hamilton

A 136-year-old home made of hand kiln brick, and wood which was taken from land of the Symmes Purchase, is situated on this small plot literally abounding in nature objects. Designed to be a bird and small animal sanctuary, it has a "Garden for the Birds" in which plantings to attract birds, feeders, and bird houses fulfill this objective. This includes houses for encouraging the return of the bluebirds.

Numerous old trees, primarily oak and hickory, as well as young flowering and hardwood trees, serve as a memorial to the Crawfords. Part of the building is the office of the county park district. Home tours and a recreation room for eating are available by reservation at a nominal cost. The large conference room may be scheduled for meetings.

FOUR MILE CREEK PARK
22 acres

At the end of Four Mile Creek Rd., 6 miles north of Hamilton

This was Butler County's first park development and features beautiful creekside woodland areas and a low dam which impounds two acres of the stream. Forest and aquatic studies are feasible.

GOVERNOR BEBB PARK
230 acres

On SR 126 between Oxford and Scipio in the southwest segment of the county near the Indiana border

In this park a heavily wooded forest with 27 species of native Ohio trees contains the reconstructed birthplace of Ohio's 19th governor. A pioneer log village consisting of a school, tavern, pioneer store, and two dwellings has been reconstructed around the Bebb cabin. A youth hostel and a bunkhouse provide complete cooking facilities and sleeping quarters for 32.

Dry Fork Creek, a branch of the Whitewater River, flows through the park. High bluffs of Ordovician limestone provide scenic topography in the forest. Wildflowers and small animals may be seen. Another feature of this park is the covered bridge which you travel over to enter the park. Accommodations include use of the youth hostel and bunkhouse on a reservation basis only.

INDIAN CREEK BURIAL GROUND
2 acres

On Indian Creek Rd. between Oxford and Reily

This pioneer burial ground includes the historic Indian Creek Church. Built in 1829, the structure is one of the oldest church buildings in the county.

People interested in local history may follow the beautiful Indian Creek Road to visit the old pioneer church and cemetery. Under many trees lie numerous grave sites of the earliest settlers of the Indian Creek region.

"Other park lands may be used for recreation, but this land is simply for the good of the soul...where the violets and redbud bloom...where the trees touch the sky...where the birds sing...where the old church is filled with memories of our earliest settlers...and where there is an instilling quality of closeness to God" (from Butler County Parks brochure).

INDIAN CREEK PARK
150 acres

On SR 732, between Reily and Oxford

This preserve extends along Indian Creek, surrounded by heavily wooded hillsides and bluffs of Ordovician limestones and shales. The rugged topography and forest trails offer excellent opportunities for nature study, which can

BUTLER COUNTY PARK DISTRICT (Cont.)

embrace 26 species of native trees and many wildflowers as well as good fossil hunting and bird study.

Three acres of water are maintained, giving shore habitat for plants and animals in summer, recreation in winter. This park is considered a good outdoor laboratory by Miami University classes, both for science and art. Future plans call for a bike trail and a youth hostel.

MIAMI AND ERIE CANAL PARK
170 acres

Along Canal, Houkaste, and Reigart roads from Hamilton to Middletown

The historic Miami and Erie Canal lands between Hamilton and Middletown form the basis for this park complex, which features several recreation areas, forest tracts, and restored areas of the canal. A two-mile hiking trail goes along the canal, which adjoins Rentschler Forest at Reigart Road. The scenic woodland trail has several vista points overlooking the Miami River.

PATER PARK
200 acres

On the Reily-Millville Rd.

This park features 15 acres for recreational uses with the remaining 185 acres used for hiking trails, bridle paths, fishing, and hunting. The mixed hardwood forest provides shelter for many birds and small animals and an overstory for wildflowers. The park includes one mile of access to Indian Creek for aquatic studies and Ordovician fossil collecting.

RENTSCHLER FOREST PRESERVE
27 acres

On Reigart Rd., along the Miami and Erie Canal

It is the purpose of the park district to develop here, through good forestry practice, an excellent example of native hardwood forest as found in pioneer times. The woodland is composed of the pin and white oaks, red maple, sweet gum, beech, and hickory trees typical of southwestern Ohio.

Steep ravines in the Ordovician shales and limestones create rugged topography. Wildflowers are abundant in the spring. Hiking trails with access to the Miami River add to the preserve's interest.

ST. CLAIR RECREATION AREA
28 acres

On the Hamilton-Trenton Rd., at Overpeck

This park features a 14-acre lake managed for fishing. It is an abandoned gravel pit reclaimed for recreation. Herbaceous succession plants and some native Ohio trees may be studied.

CAMP CAMPBELL GARD
175 acres

4803 Augspurger Rd., 6 miles northeast of Hamilton

In 1926 a YMCA camp was established on the flood plain of the Great Miami River. This rich natural environment is underlain with Ordovician limestones and shales in an area where the glacial-fed river has cut through bedrock leaving flood plain deposits of 17 to 23 feet in thickness. Major forests are typical flood plain species with sycamore, cottonwood, box elder, some oak, and white pine plantings. Woodland wildflowers are abundant, and include wild ginger and marsh marigold.

New winterized lodges, several miles of hiking trails, a weather station, bird blind, telescope, visual aids, an extensive library, and abundant recreational facilities are conducive to a quality experience in outdoor education.

The professional staff at Camp Gard is available for consultation, planning, and implementation of an effective program. The staff and classroom teachers become jointly involved in preparation for, execution of, and follow-up activities of each school in an outdoor education experience. A multimedia presentation is available to schools, teachers, parents, and civic groups as an introduction to program possibilities and physical facilities. Interested school principals, curriculum coordinators, science coordinators, teachers, and school administrators are invited to visit the camp by appointment.

Director of Camping Services
Hamilton YMCA
105 North 2nd Street, Hamilton 45011
(513) 895-6901 - Office
(513) 867-0600 - Camp

CLIFFVIEW OUTDOOR EDUCATION CENTER
30 acres

On Eaton Rd. adjacent to Wilson Junior High School

The fascinating story of a small group of educators working with federal funds to develop an outdoor education property already belonging to the school is typical of some of Ohio's best land use programs. Foundation funds provided salary monies until the school receiving its benefit recognized the merit of the program and accepted responsibility for its continuation.

Cliffview is picturesque, with its sheer exposures of Ordovician limestone and shales, cut deeply by a tributary of the Great Miami River. Its extensive wooded areas contain a great variety of habitats and many tree species because of the differences in elevation. The animal life, relatively undisturbed at the edge of the city, is varied, with rabbit, squirrel, chipmunk, muskrat, raccoon, opossum, fox, and skunk in evidence.

Shelter houses serving as outdoor classrooms and two miles of hiking trails give ample diversity for daily use by a large number of students. For teachers or administrators

looking for ideas for developing a program, this is an exemplary situation.

Ranger Duke Caldwell
1126 Western Avenue, Hamilton 45013
(513) 892-8628

FANTASY FARM

150 acres

On SR 4 south of Middletown

Several thousand school children per year visit this former farmland, now used primarily as a park for recreation. The hilly terrain sloping toward the river is underlain with Ordovician limestones and shales, covered in part with trees and other vegetation typical of limy glacial till soils.

The feature attractions for the children are the number and variety of domestic and wild animals which may be seen, fed, and petted.

An antique house and barn are equipped to be representative of the 1890 period of farm life: the wood cooking stove, dash churn, fireplace, and furniture of that period, including the wooden wheel baby carriage, portable organ, and straw-tick mattress.

In connection with this attraction is a family park with picnic areas and shelter houses.

The experience can be enriched with hikes through the farm along several hiking trails.

Edgar Streifthou
Route 1, Middletown 45042
(513) 539-7523

HUESTON WOODS STATE PARK

3,584 acres

On SR 732, north of Oxford

Hueston Woods originally was the name of a 200-acre, virtually uncut beech-maple climax forest now encompassed by the large state park. It still stands unharmed although surrounded by the products of human engineering. See Nature Preserve section for more detailed description of this forest.

A dammed stream forms Acton Lake, comprising 625 acres of the area. An active sugar bush, a nature display center, numerous winterized cabins, a magnificent lodge, tree plantings, and reconstructed pioneer homes are a few of the added features enhancing the natural environment. Not to be ignored are the exposures of Ordovician limestone and shales which are excellent fossil hunting sites. An interpretive naturalist is available all months of the year.

Park Manager
Hueston Woods State Park
Route 1, College Corner 45003
(513) 523-6347

PATER LAKE STATE WILDLIFE AREA

192 acres

10 miles west of Hamilton off SR 129

Beech, oak and hickory are the predominant trees on this property. Numerous upland game species are protected, namely cottontail rabbit, bobwhite quail, fox squirrel, woodchuck, raccoon, muskrat, skunk, and opossum.

Division of Wildlife District 5 Office
Route 3, Xenia 45385
(513) 372-7668

SPRING HILL NATURE CENTER

11 acres

Surrounds Spring Hill School at 2101 Brell Dr., Middletown

Through the volunteer effort of teachers, this elementary school boasts a well-developed nature trail as a part of its nature center. The trail winds through a woodland which contains a wide variety of trees, some of them typically found in areas of calcareous soil, notably chinquapin oak and redbud. The trail goes through a meadow and along a creek, part wet and part dry. An eroded area also has its story to tell. Tree planting and a bird feeder are evidence of student and teacher activity.

The area may be visited during the school year if reservations are made well in advance.

Secondary Science Coordinator
Middletown High School
1515 Girard Avenue, Middletown 45042
(513) 423-0781

CARROLL COUNTY

ATWOOD LAKE

Land - 2,580 acres Water - 1,540 acres

On SR 212, 39, and 542 near Dellroy

The long, relatively low earth dam was constructed across Indian Fork in 1936 for flood control, water conservation, and recreation. The water impoundment is surrounded by a native hardwood forest, extensive pine plantations, and fields in natural succession, all of which add to the beauty of the area and curb erosion.

There are several miles of hiking trails, many camping areas, rental cabins, and a beautiful lodge. The area provides an abundance of wildlife habitats which can be discovered by exploration.

Muskingum Watershed Conservancy District
1319 Third Street, NW., New Philadelphia 44663
(216) 343-6647

BUCKEYE TRAIL

9 miles

On township roads along Leesville Lake from near Sherrodsville to Bowerstown

The trail extends through the southwest part of the county, passing through upland hardwoods of beech-maple, oak-hickory forests with the wildflowers, shrubs, and small animals typical of this association. Along Leesville Lake the path leads through white and pitch pine plantings with 30 or more years of growth. Facilities are available at Leesville Marina.

For maps and further information contact:

Buckeye Trail Association, Inc.
P.O. Box 254, Worthington 43085

CAMP ALDERSGATE

40 acres

On east side of Leesville Lake

A new winterized lodge is an inviting feature of this camp property. Situated on the shores of Leesville Lake, the camp offers access to the adjoining property of the Muskingum Watershed Conservancy District.

The area is wooded, much a result of reforestation at the time the lake was established. There is an abundance of flowers, animals, and good rock exposures in the sandstones of Pennsylvanian age. Hiking trails, sleeping cabins for moderate weather, and other facilities are available.

Manager
Camp Aldersgate
10776 Asbury Road, Hiram 44234
(216) 569-3172

CAMP FALCON

750 acres

On Leesville Lake across from the dam

This camp lies in forested seclusion created by pine-covered slopes going down to the water's edge. It is on the inside of the horseshoe of the eight-mile lake formed by damming two tributaries of Conotton Creek. In addition to the 13 acres used for camp facilities, a camp ranch of 200 acres, a game preserve of 250 acres, and 300 acres of wooded hills belonging to the Muskingum Watershed Conservancy District may be used responsibly for camp activities.

Mixed hardwood forest, wildlife plantings, fields farmed and fields in natural succession, and several creeks with rock exposures are available for study. Dining and recreation halls, an infirmary, craft shop, and 13 cabins provide facilities which are not winterized, and can be used only in spring and fall. Access to the natural areas is by hiking, canoeing, and horseback riding.

Jack Hardman, Director
2019 Arnold Acres Drive, Pittsburg, Pa.
(412) 921-3350

CAMP MUSKINGUM

256 acres

East side of the north section of Leesville Lake

Used extensively for outdoor education for some time, FFA. Camp Muskingum is well adapted to the purpose. The camp is on a hill beside the lake, much of the shoreline reforested in pines. Sandstone outcroppings of Pennsylvanian age are evident at the water's edge. Wooded areas above are typical native hardwoods with many wildfowers in association.

Sixteen experimental forestry plots of one-half acre each have been planted by resident campers. Soil profiles are available for study of soil types and horizons.

A large rustic lodge with assembly hall, food service, and sanitary facilities is the focal point. Four dormitories with a capacity of 300 campers are available. A nature trail, outdoor education pavilion, and a 160-acre farm are recent additions. All buildings are comfortably winterized.

John Davis, Director
Route 3, Carrollton 44615
(216) 627-2208

CAMP WAKONDA

97 acres

On Leesville Lake one mile from Leavittsville

Wakonda's acres include woodland beside Leesville Lake, mowed open space for recreation, and fields in natural succession. The shoreline was reforested in pine about 30 years

ago, shortly after the dam was constructed. The natural woodland contains maple, oak, and cherry, with dogwood, crabapple, and other plants in association. Wildflowers grow in the various plant communities.

Small animals are frequently seen, sometimes deer. Beaver and muskrat may be watched on the lake. A lodge with a balcony provides cooking and sanitary facilities with sleeping quarters for 32 people. Nine sleeping cabins are available for mild weather use.

Manager
Camp Wakonda
Route 1, Sherrodsville 44675
(216) 735-3732

GREEN HILLS TREE FARM

180 acres

2 miles south of Carrollton off SR 332

This American Forestry Institute-certified tree farm grows a large variety of conifers, including unusual species such as Douglas fir, loblolly pine, and ponderosa pine.

In addition, several miles of woodland trails provide access to a good assortment of hardwood trees and wildflowers. Wildlife plantings attract birds, and animals such as grouse and deer are seen. Four small lakes provide sites for studying aquatic plants and animals. They are underlain by Pennsylvanian age rocks, with strata exposed in various places.

Donald N. Haugh
715 Scio Road, Carrollton 44615
(216) 627-2952

HIGH HOPES HOLIDAY HOUSE

13 acres

On Co. Rd. 12, one-quarter mile northeast of Harlem Springs, just off SR 43

Nestled in a picturesque setting at the base of a ski area, High Hopes Holiday House might serve as home base for a day's field trip. A small pond on the property provides habitat for aquatic plants and animals. The wooded area contains wildflowers and many kinds of birds. The lodge has ample meeting space but no overnight accommodations. The owner's 580-head dairy farm is suggested for a visit also.

R. Edgar Snode
Route 1, Mechanicstown, 44651
(216) 627-2477

LEESVILLE LAKE

Land - 2,620 acres Water - 1,000 acres

Near SR 212 and 164, northeast of Leesville

Leesville Lake is a large impoundment of two creeks at their confluence. It is a narrow winding lake with completely wooded shoreline. For this reason there is little accumulation of silt in the reservoir.

Extensive pine plantations were established along the shore during the 1940s shortly after the dam was built. Part of the land adjacent to the public shoreline is leased to resident camps, some of which are used for school camping. Picnic facilities are available at the dam and boat liveries.

Muskingum Watershed Conservancy District
1319 Third Street, NW., New Philadelphia 44663
(216) 343-6647

ROLLING Y RANCH

600 acres

On SR 39, near Sherrodsville

This large ranch and farm used by the Cleveland YMCA for recreation and retreat has much of value for outdoor education. The land lies on the unglaciated, highly dissected Allegheny Plateau, underlain by Pennsylvanian age sandstones, shales, and coal measures.

Woodlands are in the oak-hickory forest association typical of residual acid soils. Wildflowers and wild animal life are abundant. Streams have eroded through to reveal outcrops of the rocks in ravines. A lake provides for recreation and study of aquatic plants and animals.

The ranch has 53 horses, eight cattle, and three goats. School camping on weekdays will be considered.

Cleveland YMCA
2200 Prospect Avenue, Cleveland 44115
(216) 627-4587

TWIN VALLEY FARM

365 acres

1½ miles northeast of Harlem Springs on Co. Rd. 12

Situated in the rolling hills of the area, this large acreage is used for both a vacation spot and farming. The extensive wooded areas contain mixed hardwood trees, wildflowers, and small animals. A lake and small stream provide water habitat. An old coal mine, some strip mine areas, and a limestone plant that makes slag and lime are accessible for study. Observation of farm animals and farming operations may be included in arrangements for a field trip.

Mr. and Mrs. Lewis Dunlap
2330 Appollo Road, SE, Carrollton 44615
(216) 739-2811

CHAMPAIGN COUNTY

CAMP SHAWANO

165 acres

On Kiser Lake

Situated on the hummocky end moraine of the Wisconsinan glacier, in a boulder belt containing a large quantity of rocks brought by the glacier and left in place, this Camp Fire Girl camp has an interesting glacial story to tell. It has deep ravines, wooded areas showing a display of spring wildflowers, and small streams running through the property. Hiking trails lead along the streams and through the woodland revealing some challenging erosion problems.

Resident camping for a small group in its winterized lodge is feasible during the school year. Two tenting units and one cabin unit are available for use in late August, September, October, and May. Field trips or one-day study projects may be carried on during these months, also.

Camping Director
Shawnee Council of Camp Fire Girls
184 Salem Avenue, Dayton 45406
(513) 222-6327

CEDAR FARM

140 acres

One-half mile west of Carysville off SR 29

This beautiful farm provides a wide variety of ecological and conservation education experiences. Seventy acres consist of a reforested succession and woodland tract, farm pond, peat bog, swamp land, and gravel pit. Fencerows are maintained for wildlife feed and shelter. Sixty-seven thousand red, white, and Scotch pine were planted at various places on the farm.

The effects of glaciation are evident in the topography, the soil type, the underlying glacial lake deposits of clay providing springs and bog, outwash sand and gravel, and glacial erratics.

Mosquito Creek on the south border and Huling Creek on the west have abundant fish, reptiles, and aquatic plants, including marsh marigolds. The 70 acres of cropland are used for popcorn as well as other farm products. Indian and pioneer history enrich the site for multipurpose field trips.

The owner, widely recognized for his conservation interests and practices, will act as guide for tours.

Thurman H. Huling
12475 West Route 29, Conover 45317
(513) 362-2530

GRAHAM LOCAL SCHOOLS OUTDOOR EDUCATION AREA

63 acres

At the rear of the high school in St. Paris

On school property, the 45 acres set aside for a land laboratory are only partially developed. The land is located on an end moraine of the Wisconsinan glacier characterized by rolling topography. There are low-lying areas which are somewhat swampy ravines cut by erosion.

The area has a one-third-acre pond, a small forest, a pine plantation, and some acres used by vocational agriculture students for experimental planting. Included also is an untouched plot for study.

Principal
Graham Local Schools
7800 W. Route 36, St. Paris 43072
(513) 663-7471

KISER LAKE STATE PARK

864 acres

17 miles northwest of Urbana on SR 235

The topography of this park is flat to gently rolling, lying in glaciated territory. There is a considerable amount of forested natural area, mesophytic (mixed hardwood) in type.

The shallowness of the lake and the bordering marshland provide good habitat for an abundance of water-associated plant and animal life. The atmosphere is peaceful, partially because no power boats are permitted on the lake.

A seasonal nature program is provided from mid-June to Labor Day. Activities include hikes, slide programs, movies, and a junior naturalist program for children ages nine through 14. An amphitheater and nature center are north of the campground. Several hiking trails beginning at the picnic areas have been developed. Maps are available upon request.

Park Manager
Kiser Lake State Park
Box 586, St. Paris 43072
(513) 362-3822

OHIO CAVERNS

100 acres

On SR 245, 4 miles east of West Liberty at the junction of Champaign and Logan counties

A natural feature created as the result of descending, dissolving groundwater in limestone rocks, Ohio Caverns are unusually colorful and splendid. Cave formations including large and small snowy stalactites and stalagmites, calcite crystals and bands of travertine, adorn the ceilings and passageways. These are deposits from the evaporation of water which was saturated with dissolved limestone.

The park area above ground contains a variety of trees and shrubs. The tour of the underground passages is well conducted but a prior understanding of basic geologic processes would be helpful.

Special rates and srvices are given to school groups during spring and fall. They are advised to make reservations well in advance.

Manager
Ohio Caverns, Inc.
Route 1, West Liberty 43357
(513) 465-4017

SIECENTHALER FARM
16 acres

On Calland Rd., norhwest of Urbana, off SR 29

This property is of interest primarily because it contains outstanding land forms resulting from the last period of glaciation. Glacial outwash deposits in the form of a sinuous ridge composed of bedded sand and gravel rise above the ground surface. This feature has the characteristic profile of an esker, typically formed in the stream channel of a wasting glacier. Cros-bedding is observable in a cut.

Birds are abundant in the area; swamp habitat and the sand and gravel ridges shelter a variety of plants and animals.

V.L. Siegenthaler
7601 Calland Road, West Liberty 43357
(513) 465-3284

URBANA STATE W LDLIFE AREA
549 acres

6 miles north of Urbana, 1 mile east of SR 68

The Urbana Wildlife Area lies in a glaciated area showing extensive wildlife, soil, water, and woodlot conservation practices. Three small farm ponds provide water habitats. Two woodlots have an overstory of oak, hickory, maple, elm, and cherry and understory of a dogwood, hawthorn, wild grape, and blackberry mixture. Animals seen include pheasant, quail, rabbit, Hungarian partridge, dove, and fox squirrel. The area is enclosed with a chain link fence.

Division of Wildlife District 1 Office
1500 Dublin Road, Columbus 43212
(614) 466-4603

CLARK COUNTY

BUCK CREEK STATE PARK
under development

Just northeast of Springfield off SR 4

The C.J. Brovn Reservoir was recently acquired from the U.S. Army Corps of Engineers. It is little developed at the present time The large area of the park is primarily open farmland in natural succession with some wooded ravines. The valley of Buck Creek is forested with oak and maple, while the uplands support mixed oak forests.

District Supervisor
Ohio State Park District 2
Route 1, Box 3, Lakeview 43324
(513) 842-3476

CLARK LAKE STATE WILDLIFE AREA
288 acres

2 miles northeast of Harmony, off US 440

One hundred and four acres of impounded water make a good fishing area and create habitats for study of aquatic plants and animals. Waterfowl are present during spring and fall migrations. Oak-hickory forest and typical wildlife are found in the small woodlots associated with the lake.

Division of Wildlife District 5 Office
Route 3, Xenia 45385
(513) 372-7668

GEORGE RODGERS CLARK PARK
150 acres

3 miles west of Springfield off I-70

This beautiful city park is composed primarily of a large, well-manicured section and a lovely woodland containing a seven-acre lake. Wisely, the sugar maple and oak forest is being preserved in its natural state.

A small stream is captured to form the lake which provides an excellent study area for aquatic plants and animals as well as fishing. The land lies on the edge of a glacial moraine, the soil derived from the till. It is underlain by the dolomites of Silurian age. Herbaceous species in the wooded area are outstanding enough to enlist the interest of Wittenberg College classes.

Historically the site is of interest for its monument to George Rodgers Clark, and for Hertzler House, the site of the Battle of Piqua.

Board of Park Trustees
City Building, Springfield 45501
(513) 325-8754

GUNDOLF'S FARM
95 acres

1½ miles southeast of Northampton off SR 41

A tour of this farm under the guidance of the owner would include the examination of his farm plan, soil types,

and conservation practices. The forested area contains 36 species of trees. Wildlife dens and feeding grounds and wildflowers may be observed. A winterized shelter and farm pond are available for use.

J. Paul Gundolf
2964 Myres Road, Springfield 45501
(513) 964-1160

NORTH HIGH SCHOOL LAND LABORATORY

92 acres

On the rear and east side of school building

The land laboratory of this school is utilized as a composite study area for soils, stream erosional and depositional features, evidences of glaciation, and Silurian age rock strata. A wooded section contains hiking trails in the beech-maple and white oak forest association. Small animals and deer are present.

Biology Department
North High School
49 E. College Avenue, Springfield 45501
(513) 323-7593

SNYDER PARK

200 acres

Within city limits on west edge of Springfield

Open woods and flood plain characterize this property. Buck Creek traverses the park on the east side, and it is bordered on the west by the Mad River and a railroad. Spring thaw and rain frequently find both creek and river inundating the area. In addition, the park contains an eight-acre lake.

Silurian age dolomites in the Niagara strata are exposed on the north and northeast boundaries. Natural succession plants may be found along the streams and the railroad. Study possibilities are numerous, depending on subject emphasis.

Board of Park Trustees
City Building, Springfield 45501
(513) 325-8754

CLERMONT COUNTY

BUCKEYE TRAIL

27 miles

From east of Edenton to Miamiville, where it divides and one branch goes northward along the Little Miami River to Loveland and the other crosses the river into Hamilton County

The trail passes Edenton and enters Stonelick State Park, where it crosses through flat, poorly-drained areas. Note the change in plant species which occurs with a change of only a few feet in elevation (see description of Stonelick State Park following).

The trail continues westward to Miamiville, following some major traffic-bearing roads and highways. When walking along roads, keep on the left facing approaching traffic. As cars approach, step off the pavement onto the berm giving traffic ample space to pass.

The trail skirts the large Camp Edgar Friedlander, Boy Scout camp, on Ibold Road (see description following). From Miamiville, the trail goes northward along the Little Miami River valley through an area predominantly of the mixed hardwood forest type. The valley walls rise steeply to the east, and are 100 to 200 feet high.

For maps and further information contact:

Buckeye Trail Association, Inc.
P.O. Box 254, Worthington 43085

CAMP EDGAR FRIEDLANDER AND CRAG WILDERNESS

860 acres

On Ibold Rd., 1 mile east of Miamiville

With its large acreage of woodland along the Little Miami River, this camp and the wilderness area adjoining it have tremendous potential for nature study, including geology and glaciation. The river valley itself has the typical profile resulting from carrying meltwater from the Wisconsinan ice sheet. Notable are the wide flood plain, terraces, cutbanks, natural levee, and meandering pattern. The area is within the border of Illinoian drift, the chief influence of which was to leave a thick deposit of outwash silt, sand, and gravel on the old rock floor. The underlying rocks are hard calcareous shales and limestones of Ordovician age.

The properties include a scenic view along Horners Run Creek. Bedrock is exposed and fossil hunting is good. The lush forest, mixed oak in type, contains walnut, maple, sycamore, and many other species with an abundance of wildflowers, birds, and small mammals.

The large lodge is not winterized. Field trips may be arranged.

Camp Director
Dan Beard Council
Boy Scouts of America
3007 Vernon Place, Cincinnati 45219
(513) 961-2336

CAMP SIMMS

22.9 acres

Miami Township off Price Rd., Milford

Located opposite Camp Dennison in Miami Township on a flood plain of the Little Miami River, Camp Simms offers in a small area adjacent to the Milford community a dynamic demonstration of the geological processes of river erosion and deposition and glacial activity.

The Little Miami travels south toward Camp Simms in a long straight line, then abruptly curves west around the camp. At several locations along this stretch, high terraces of Illinoian conglomerate project above the Wisconsinan outwash plain. Across the river one may see one of these terraces as well as artesian well structures which provide water for Indian Hill Village. The source of this water is the deep gravel outwash which fills the valley to the west.

The northeast boundary of the camp is formed by the edge of the outwash plain carved out by the river, forming a steep slope. The location and composition of the foundations of the original camp buildings on this ridge (approximately 50 feet above the river and 25 feet above the main camp area) offer an opportunity for relating the geologic past to man's use of the land.

The narrow camp road leading from Milford drops down steeply from the terrace upon which Milford is located beside an intermittent stream which has cut into the gravel and the Ordovician bedrock, forming the southern boundary of Camp Simms.

The central portion of the camp is maintained as a sports field. A hundred-yard strip along the Little Miami remains a typical bottomland forest with large cottonwoods, sycamores, red maples, box elders, hickories, and ash. This forest tapers off to the north where the river has in recent times cut deeply into the property. Following the northeastern ridge, the forest becomes predominately red and white oak, walnut, hackberry, sycamore, and redbud; on the top is an early succession field with box elder and ash. Wildflowers indigenous to the local forests and the field are present seasonally.

Camp Simms is available for field trips, day camping, church groups, and some overnight primitive camping. A shelter building, swimming pool, playing fields, and canoes offer varied day activities. A caretaker lives on the property year-round.

Mr. Thomas Campbell, Manager
Columbia Parkway YMCA
Columbia Parkway and Delta Avenue
Cincinnati 45216
(513) 321-0738

CHRIST CHURCH CAMP

100 acres

On Linroot Rd., off SR 774 north of Felicity

This camp is in the lower part of the county on rolling hillsides covered with Illinoian glacial till soils and underlain with Ordovician limestone and shale. The acreage is largely woodland, providing many teaching opportunities. Large open fields, complete food service, recreation and craft buildings, a woodland chapel, and a pond provide for a variety or programs.

Cabins and lodge are not winterized, which somewhat limits resident camping, but field trips for relationship studies are delightful.

Director, Christ Church Camp
318 East 4th Street, Cincinnati 45202
(513) 621-1960

CINCINNATI NATURE CENTER

680 acres at Cincinnati Nature Center
534 acres at Long Branch Farm

Long Branch Farm - An educational division of the Cincinnati Nature Center

On Tealtown Rd. south of US 50, east of Milford, near Perintown

This nature center has become an environmental ecology learning area for thousands of school children and adults. It is supported principally by membership dues and donations and utilizes a large group of volunteer teacher naturalists. Membership is not restricted. The area is rich in a natural variety of habitats, including a beech-maple climax forest with wildflowers, shrubs, and planted daffodils making an understory of striking loveliness. Several miles of nature trails provide access to a very natural-appearing lake, a gully with a stream eroding beds of Ordovician age limestones rich in fossils, a natural forest area on the stream flood plain and terrace, a cliff exposure of the limestones and shales topped by tillite of Illinoian glacier age. Management units have been established, with wildlife plantings, soil and water conservation, and pine plantations. The Casper H. & Fannie S. Rowe Interpretive Building provides a focal point for educational activities and members' programs.

Long Branch Farm, a recent gift to the Cincinnati Nature Center by Neil H. McElroy, will be operated by the Cincinnati Nature Center to provide education of children and adults in agricultural ecology. The farm, open only to scheduled groups, will continue as an operating purebred Angus farm.

Director
Cincinnati Nature Center
4949 Tealtown Road, Milford 45150
(513) 831-1711

CLERMONT NORTHEASTERN LAND LABORATORY

122 acres

Near Batavia on US 50

This land laboratory contains 88 acres of woodland with 40 species of trees and 150 native plants. Fourteen acres of fields in natural succession, two streams with exposures of

the Ordovician age limestones bearing typical fossils, and two ponds provide ample habitat to study aquatic plants and animals. Forty species of birds have been counted on the property, twenty different kinds of animals, and an abundance of insects. The nature center is a part of the school campus, which limits visits to school hours. The use of an unsheltered outdoor classroom and autoguide tapes may be requested.

Leo H. Bradley
Clermont Northwestern Land Laboratory
Route 4, Batavia 45103
(513) 732-2551
(513) 625-1211

EAST FORK STATE PARK
under development

South of Batavia, off SR 222 and SR 125

Recently acquired from the Corps of Engineers, East Fork is little developed at the present time. The reservoir was created by damming the East Fork of the Little Miami River.

The park lies within the border of Illinoian drift. The Ordovician limestone bedrock is of the Eden formation. The deep wooded ravines provide habitat for a variety of plant and animal life. Beech-maple forests and mixed mesophytic forests prevail.

Park Manager
East Fork State Park
Route 2, Box 48, Batavia 45013
(512) 734-4323

STONELICK STATE PARK
800 acres

South of SR 727, near Edenton

Stonelick Creek, a tributary of the Little Miami River, was dammed to create a lake of about 200 acres. The park area includes a beech-maple woods on the east side of the lake which is a good wildlife area.

Fields now in natural succession contain some prairie species. A few marsh areas along the shallow margins of the lake are good study areas for water vegetation and animals. A nature program is conducted during the summer months. The area is relatively flat since it lies in the undissected Illinoian glacial till plain.

Park Manager
Stonelick State Park
Route 1, Peasant Plain 45162
(513) 625-7544

WILDWOOD CHRISTIAN EDUCATION CENTER
250 acres

Off Round Bottom Rd. southwest of Ferinton

With woodland covering steep ridges and valleys, streams showing Ordovician rock ledges, and fields and meadows in natural succession, this site has many rich habitats for the study of relationships of plants, animals, and physical environment. Two winterized lodges, ideal for small groups (10 to 50), make year-round resident camping, conferences, retreats, or training programs excellent possibilities.

Program Director
Wildwood Christian Education Center
Box 207, Milford 45150
(513) 831-5211

CLINTON COUNTY

CAMP KIRKWOOD
250 acres

5 miles northwest of Wilmington on SR 73

Camp Kirkwood consists of rolling natural succession fields and heavily wooded forest. Dutch Creek meanders through the property, exposing outcrops of Silurian age rock strata and showing typical erosional and depositional features. The wooded areas contain many species of trees including maple, beech, oak, hickory, and walnut on the well-drained areas; sycamore, cottonwood, aspen, honey locust, and willow on the low-lying flood plain and terrace levels.

A small pond for wildlife study is a recent addition. Many flowers and birds may be observed in season. A large lodge has sleeping quarters for 48 persons and food service facilities. A new 3½-acre lake has been constructed. It will be stocked with fish and is available for use with small boats. The owner recommends use for resident camping from September through May. Field trips may be conducted anytime.

Ohio Baptist Convention
Box 386, Granville 43023
(614) 587-0804

CHERRYBEND PHEASANT FARM
375 acres

2 miles southeast of SR 3 and 22 at Melvin

The primary interest on this property is the hatching, care, and growth of pheasants. Chicks are hatched every Monday in the spring and summer. In fall and winter 20,000 pheasants can be watched in their pens. Other animals on the farm are peacocks and hunting dogs. A second

growth hickory woodlot with wildflowers would be of interest particularly in the spring.

Mr. & Mrs. Harold H. Hollister
Box 87, Route 4, Wilmington 45177
(513) 584-4269

COWAN LAKE STATE PARK
1,775 acres

On SR 350 southwest of Wilmington

Gently rolling topography typical of the Wisconsinan glacier end moraine is a distinctive feature of the park around Cowan Lake. The park property includes an overlap of Wisconsinan till on Illinoian till, the latter extending south and west of the dam site. Excellent exposures of Liberty shale and Waynesville shale (Richmond formation) which are very fossiliferous are seen in the spillway cut. The original Cowan Creek bed may also be explored for fossils. Genera include brachiopods, gastropods, bryozoa, and trilobites.

The north side has a dense stand of mixed hardwoods with shrubs and wildflowers in association. Seven hundred acres of lake provide ample access for the study of aquatic plants and animals. An interpretive naturalist is available during summer months.

Park Manager
Cowan Lake State Park
Route 1, Wilmington 45177
(513) 289-2107

COLUMBIANA COUNTY

BEAVER CREEK STATE PARK
2,405 acres

Off SR 7, 8 miles northwest of East Liverpool

A park rich in wildlife, scenic beauty, and historic reminders of pioneer life, Beaver Creek is outstanding for field trips and class study. The creek itself, a wild river, is fairly unpolluted as it rushes with a steep gradient over the Pennsylvanian age sandstones to form a steep walled gorge.

Glacial relict vegetation, hemlocks, Canadian yew, and members of the heath family have persisted in the cool moist ravine, which approximates their northern habitat. Excellent wildflowers are found in association as well as typical small animals. Hiking trails give access for observation of all the scenic features.

Remnants of the Sandy and Beaver Canal, a privately financed transportation venture of the mid-1800s, are prominent throughout the park. This includes Lusk's Lock, a particularly historic part built in 1836. A restored grist mill is open to the public. Though time has eradicated much of the evidence, portions of the park were stripped for coal. A naturalist is on duty from mid-June to Labor Day.

Park Manager
Beaver Creek State Park
Route 1, East Liverpool 43920
(216) 385-3091

BEAVER CREEK UNITED PRESBYTERIAN CAMP
120 acres

Along Little Beaver Creek near Calcutta

The camp is situated in a heavily wooded ravine along Little Beaver Creek above Grimm's Bridge. The rugged beauty of Little Beaver Valley is difficult to surpass in Ohio. The stream, fortified by a great volume of water from the wasting glacier, has cut a deep trench in the upland plains through the massive sandstone of Pennsylvanian age.

Steep walls varying from 300 to 500 feet in height are topped with lustrous oaks and other hardwoods, gradually yielding to a cover of feathery hemlocks and other species of glacial relict vegetation. Projecting crags have ferns and creeping plants growing in abundance at their bases. Wildflowers grow in profusion; there is evidence of beaver activity and other animal life.

Two lodges with sleeping quarters and food service facilities are available for school camping during the week in the spring and fall months. Field trips along old Indian trails may be arranged when camp is not in use. The area is now being studied by the federal government for inclusion under the Wild Rivers and Streams Act of 1968.

George Reynolds
Beaver Creek Camp
Route 3, East Liverpool 43920
(216) 385-3490

BEAVERKETTLE FARM

4,000 acres

Located near Fredericktown

In one of the most picturesque spots in Ohio, the Vodrey estate is an exciting natural area. Within the property a section of the Little Beaver Creek and the North Fork of Little Beaver, both streams greatly affected in their drainage by their relationship to the glacial boundary, have the steep walls and deep gorges typical of stream reversal. All of the North Fork formerly flowed north but now rushes over sandstone rapids and ripples to join the Little Beaver at the point where the Little Beaver, too, flows south into the Ohio.

The upland plains are covered with large oaks and native white pines which give way in the cool moist ravines to feathery hemlocks and other glacial relict plants. Yellow birch, river birch, and rare herbaceous plants are found in the association. There is a complete selection of wildflowers in the area, and wild animals include grouse and deer.

A segment of the Sandy and Beaver Canal adds historic significance. Field trips may be arranged any time of the year.

Elmer Hiles
Route 1, East Liverpool 43920
(216) 385-2799 - Farm
(216) 227-3056 - Home

BOY SCOUT CAMP

423 acres

In Washington Township near Salineville on Twp. Rd. 775

This is an area in the Yellow Creek watershed south of the glacial boundary. The glacial waters caused the streams to deepen their valleys to form deep rugged ravines. Pennsylvanian age sandstones are exposed in rock ledges.

Much of the area is woodland with the oak-hickory forest type on the upland plains and hemlock prominent in the cool, moist valleys. A swamp and several small streams provide aquatic habitats. Woodland and the tree plantings shelter small wild animals and flowers.

The property has no buildings, so use is limited to field trips or primitive camping.

Mahoning Council
Boy Scouts of America
120 E. Rayen Avenue, Youngstown 44503
(216) 744-4488

CAMP MERRYDALE

17 acres

5 miles north of Salem

A small, heavily wooded camp, this area contains a little creek, wildflowers, and small animals. Hiking trails, a lodge, shelter house, and other facilities are available. No charge is made for field trips.

Camp Registrar
Tayanita Council of Camp Fire Girls
Route 1, Salem 44460
(216) 337-6413

CAMP PAUL E. DEAN

82 acres

Near Rogers, Ohio

A rustic, natural woodland area provides the setting for this camp used by the Boys Club of McKees Rocks. The thick, mixed oak forest contains many species of trees and a rich herbaceous understory for the study of plants. Historic Bull Creek runs through the property, exposing Pennsylvanian age sandstones, coal, and shale. A small dam has been constructed which provides for canoeing, swimming, and challenging water chemistry and aquatic life study above and below.

A winterized lodge and cabins suggest the possibility of resident school camping.

Manager
Camp Paul E. Dean
343 Munson Avenue, McKees Rocks, Pennsylvania 15136
(412) 331-5845

FIRESTONE HOMESTEAD FARMS AND TEST CENTER

800 acres

On the corner of SR 14 and 7

"To me the American farm represents the spirit and fundamentals that have made America so great a nation...."

Thus spoke Harvey S. Firestone, founder of the Firestone Tire and Rubber Company, and great-grandson of the 1797 homesteader Nicholas Firestone, who journeyed to the rolling countryside of Columbiana County from his Maryland home to find land with opportunity and promise. For nine years Nicholas Firestone and his family lived in a log cabin while he gradually cleared fields. In 1803 he made his final payment for 640 acres, the deed signed by President Thomas Jefferson in 1804. In 1828 he constructed one of the earliest brick houses in the region from bricks produced from the clay and fired by kilns on his own farm.

Here, as indicated by a plaque erected by the Ohio Historical Society at Columbiana in 1968 on the 100th anniversary of his birth, was born Harvey S. Firestone.

The present very modern Firestone Homestead Farms is a continuation of these early efforts. They are widely recognized for their excellence in farm management: for soil conservation research, outstanding crops, projects in forestry, and productive cattle feeding operation. Each year a large number of agriculturalists, 4-H club members, FFA, National Grange, Farm Bureau, and other interested groups visit the farms to observe advanced farming methods.

The Firestone Tire and Rubber Company is known as the company that "put the farm on rubber." From a simple beginning as a testing site for the first practical pneumatic tractor tire, the farms now include a Testing Center with testing facilities for tractor and implement tires, earth mover tires, as well as some high speed racing tires.

Tuesday and Friday are tour days, with reservations required.

Charles L. Harper, Manager
Firestone Farms
Columbiana 44408
(216) 482-2121

GUILFORD LAKE STATE PARK

489 acres

9 miles west of Lisbon on SR 172

Guilford Lake was originally constructed in 1884 as a reservoir for the Sandy and Beaver Canal. This canal, one of two connecting the Ohio and Erie Canal to Pennsylvania, was never used in its entirety; the lake remains as an historical reminder of the canal era and a popular recreation area in eastern Ohio.

The hilly topography surrounding the body of water is end moraine, an accumulation of glacial material marking the greatest advance of the Wisconsinan ice sheet in this part of Ohio. The mixture of sand and clay forms a low-lime soil of some thickness underlain by Permian age rock formations.

The 396-acre lake has a good population of a variety of fish – northern pike, crappie, bluegill, and bass. An examination of the aquatic vegetation, water quality, scattered pine plantations and other vegetation in the areas used for camping and picnicking, would provide an interesting study. The numerous activities within the park, the golf courses nearby, and the community festivities engaging the interest of park visitors explain the park's popularity (nearly a million visitors each year), making a social study another interesting possibility.

Park Manager
Guilford Lake State Park
Route 4, Lisbon 44432
(216) 222-3242

HIGHLANDTOWN LAKE STATE WILDLIFE AREA

Land - 2,035 acres Water - 270 acres

Situated south of the glacial boundary, this area is in steeply rolling topography with some flat hilltops and valley floors. Scattered ponds, a lake, and beaver dams attract a variety of waterfowl during migration. Mallard, wood duck, and teal nest in the reserve.

The upland soils are well drained but acid; hilltops are wooded with white oak, red oak, hickory, and pine forest. A large variety of wildflowers is found in numerous habitats. Quail, grouse, and other small animals occur in numbers; deer are seen occasionally. Fish, wildlife, and soil and water conservation practices may be observed.

Area Manager
Highlandtown Lake State Wildlife Area
Route 1, Salineville 43945
(216) 679-2201

YELLOW CREEK STATE FOREST

756 acres

Near Salineville

Because the land is in a coal mining territory, a program to acquire forest lands begun in 1947 was thwarted by conflict over mineral rights. However, 756 acres were acquired in three scattered tracts to comprise this state forest.

A part of the Yellow Creek watershed, the area has gently rolling uplands dissected by streams to form deep ravines with steep slopes. The upland vegetation is oak and other hardwoods, with reforestation of pine plantings. Ravines contain glacial relict vegetation, hemlocks, and other northern plants which seeded in front of the glacier and persisted in the cool microclimates after the glacier wasted back. Woodlands harbor rabbit, squirrel, and deer as well as numerous wildflowers. Field trips may be arranged.

J.T. Lenox
1888 E. High Street Ext., New Philadelphia 44663
(216) 364-4428

ZEPERNICK LAKE STATE WILDLIFE AREA

513 acres

On SR 172, 2 miles east of New Alexander

A 30-acre lake, a small pond, woodland, and rolling-to-steep topography are the physical features which provide numerous types of habitat for plants and animals. A variety of waterfowl is seen in spring and fall; wood duck and mallard use the area for nesting. The well-drained upland has oak and hickory trees as the dominant species. Fish, wildlife, and soil and water conservation practices may be seen.

Division of Wildlife District 3 Office
912 Portage Lakes Drive, Akron 44319
(216) 644-2293

COSHOCTON COUNTY

CAMP MUMAC
40 acres

Off SR 83, 9 miles south of Coshocton on Wills Creek

This Girl Scout campsite lies on a wooded flood plain along Wills Creek below the reservoir. Pennsylvanian age rocks are exposed at stream level and in a highwall created by strip mining many years ago. A large open meadow provides test sites as well as study areas for natural succession. The stream lends itself well to the study of aquatic life, chemical analysis, and glacial influences. Bird life is abundant. A shelter house makes a suitable outdoor classroom and gives protection in case of inclement weather.

Camping Director
Heart of Ohio Girl Scout Council
1215 Newark Road, Zanesville 43701
(614) 454-8563

MOHAWK RESERVOIR
3,700 acres

On SR 715 near Walhonding

A dry reservoir designed for flood protection, this large area remains essentially in its original state, modified only by natural succession and pine plantations. Most of the land is wooded in native mixed hardwood stands with typical plant and animal associations. The Mohican and Walhonding rivers wind through a scenic area which has Mississippian age sandstones exposed on occasional cliffs.

Facilities are available at the roadside park adjacent to the dam.

Muskingum Watershed Conservancy District
1319 Third Street, NW., New Philadelphia 44663
(216) 343-6647

MOHICAN RIVER ACCESS
370 acres

On SR 715 west of Walhonding

This area includes natural flowage of undefiled water capable of supporting the native fish population. The Mohican River is bordered with an interspersion of large soft maple and sycamore, with native hemlock and Eastern red cedar growing on the north-facing hillside.

The stream habitat contains a desirable population of animals including raccoon, squirrel, and mink. Various shorebirds, rail, heron, and an occasional osprey may be seen. Waterfowl consist mainly of wood duck, mallard, and blue-winged teal. Many species of forest birds are found in the wooded areas.

Division of Wildlife District 4 Office
360 East State Street, Athens 45701
(614) 593-6933

MUSKINGUM VALLEY SCOUT RESERVATION
500 acres

Near Conesville off US 16

This Boy Scout camp is situated on a Muskingum River terrace and strip mine land. Eighty percent of the acreage is woodland, native on the hilltops, plantings and natural succession on the valley floor. As many as 100 different kinds of trees and shrubs have been named.

Birds and small animals are numerous; deer are seen occasionally. Six lakes as well as the river give access to the study of aquatic plants and animals. Mississippian and Pennsylvanian age rock strata are exposed in the cliffsides and at stream level.

The camp is near the Columbus and Southern Ohio Electric plant, which is fed coal for processing on an impressive conveyer system from coal field to plant.

A winterized lodge and hiking trails are available.

Camp Manager
Muskingum Valley Scout Reservation
Box 2036, 734 Moorehead Avenue, Zanesville 43701
(614) 453-0571

PILGRIM HILLS CONFERENCE CENTER
200 acres

On SR 206, 2 miles south of SR 62

Rolling hills topped by Pennsylvanian age rock strata provide the setting for this lovely retreat, rich in a variety of habitats. Many kinds of trees, wildflowers, birds, and other animals may be observed. A stream running along the south side of the property gives access to the study of water plants and animals as well as the exposed rock layers.

Nature trails have been developed, as well as an amphitheater and "Fern Chapel." Facilities provide space for cold weather programs. Overnight accommodations are available for 170 persons in heated quarters for sleeping. Modern bath facilities are adjacent.

Mr. John Vicsek, Manager
Route 1, Brinkhaven 43006
(614) 599-6314
(800) 282-1293

PROJECT "BOYS AND EARTH" CAMP
564 acres

Off SR 541, 6 miles southeast of Coshocton

Surface mined for the Middle Kittaning or No. 6 coal under the 1947 and the 1956 amended reclamation law, this large property provides a great variety of habitats for field study. Highwalls and acid lakes contrast with gently contoured hillsides and numerous "clean lakes." Natural, unmined hilltops and steep ravines are managed as control

forests, some plots completely undisturbed with little understory growth, some selectively timbered with openings for herbaceous and woody plant succession.

The greater part of the acreage has had successive tree plantings. Several thousand alder, European alder, silver maple, cottonwood, aspen, locust, sweet gum, and autumn olive have attained heights of 15 feet or more. Grass has replaced shaly hillsides, and emergent vegetation lines some of the ponds. Three small lakes have been created by beaver activity on a stream where water is fairly pure.

Other wildlife, including deer, muskrat, fox, and weasel, have come into the area, indicating the return of adequate plant food.

The property was mined by Peabody Coal and given to the Franklin County Commissioners for a youth rehabilitation program named "Boys Own Youth Shelter, Inc." The project "Boys and Earth" is headquartered at Coshocton and provides staff with outdoor education expertise to assist teachers with field trips or research projects.

Facilities are limited at present but this federally funded project has staff and plans for a tremendous program.

Administrative Director
Box 663, Coshocton 43812
(614) 622-7093

TRIPLE LOCKS PARK AND CANAL BOAT TRIP AT ROSCOE

Off US 36 immediately west of Coshocton and the Muskingum River

Historic events and natural history both justify a memorable field trip to this area. A small park has been established just north of the restored village of Roscoe, where triple locks were constructed to join the Walhonding Feeder Canal to the Ohio Erie Canal. A large canal boat turning area is immediately below the locks. In addition to the opportunity to visualize and compute the method of raising and lowering the boats through the locks, pathways lead along the canal where ecological studies including man's relationship to the area may be made.

An authentic canal boat called *Monticello II* in honor of the *Monticello* which once plied this canal route, is available several months of the year for a mile-long trip on a strip of canal between Lake Park basin nearby and the Mud-port Basin. This is a memorable ride, a delightful glimpse into the colorful past when freight boats carrying rich farm products from the Coshocton County fields squeezed their way through the narrow canals and locks.

A visit to the village of Roscoe since its restoration in the late 1960s provides an authentic picture of the development of a typical canal town, an important page in Ohio's history. The Visitor Information Center is the recommended first stop. Background information and a map may be obtained here. Guided tours are available by reservation only.

For illustrated brochures and additional information contact:

Roscoe Village Restoration
381 Hill Street, Coshocton 43813
(614) 622-9310

WILLS CREEK LAKE

Land - 2,790 acres Water - 900 acres

On SR 76, 12 miles south of Coshocton

This long, narrow, man-made lake meanders through the rolling hills of southern and eastern Coshocton County, and along a portion of the northern part of Muskingum County. Wills Creek, a tributary of the Muskingum River which joins the parent stream south of Conesville, has a large watershed with many small streams draining into it.

The rolling hills lie in unglaciated Ohio within the Allegheny Plateau province, underlain by Pennsylvanian age sandstones, shales, coal, and limestone. The land surrounding the lake is both bottomland and rolling hillside with good developments of oak forest and bottomland timber. Rocky ravines, wildflowers, beaver, and waterfowl are plentiful.

Facilities are limited to the boat livery and a campground on SR 76.

Muskingum Watershed Conservancy District
1319 Third St., NW., New Philadelphia 44663
(216) 343-6647

WOODBURY STATE WILDLIFE AREA

2,000 acres

On SR 60, 4 miles south of Warsaw

This area is in a hilly, unglaciated sandstone and shale region. Several fine examples of mature and undisturbed native oak-hickory forest may be observed. Of special interest is a stand containing numerous large black walnut trees.

Gray squirrel, ruffed grouse, deer, raccoon, and cottontail rabbit are common. Old hillside pastures are growing sassafras, dogwood, redbud, and hawthorn as a result of natural plant succession.

Situated a few miles east of the glacial boundary, the streams are deeply entrenched from the great flow of glacial meltwater. The hills on either side rise rather steeply to heights of 200 to 250 feet, making the area beautifully scenic.

Area Manager
Woodbury State Wildlife Area
Route 2, Warsaw 43844
(614) 824-3362

CRAWFORD COUNTY

AMANN RESERVOIR

156 acres

On SR 30 south at County Line Rd.

A sizeable body of water surrounded by recreation ground and wildlife area has potential for effective ecological studies. Hiking trails lead into the beech forest remnant where many kinds of shrubs, wildflowers and birds may be observed. Aquatic plants and animals may be studied on the lake shore.

Shelter houses and other facilities have been added recently.

Service Director
City of Galion
City Building 44833
(419) 468-1680

CAMP MICHAEL
YOUTH COMMUNITY CAMP

35 acres

Between Mt. Zion and Wyandot roads on Shupp Rd., 7 miles southwest of Bucyrus

This delightful property lies on gently rolling glacial till plains dissected by the Sandusky River drainage system. An early Wyandot Indian hunting territory, this upland site, like the surrounding acres, was cleared by white men for agricultural purposes. The ravines, steep river banks, and upland borders are wooded in beech-maple forest with many oaks, hickory, ash, tulip, basswood, and flowering shrubs in the association.

A large field, an amphitheater, a small winterized lodge, and a new winterized dormitory constitute the facilities. The woodland and river areas hold excellent study possibilities. Two adjoining properties, adding 200 acres of water and woodland, may be utilized for further ecological studies (see Tschanen Woodland Tract in Nature Preserve section).

For use of Camp Michael only, contact:

Mrs. Ralph Shelt
574 Prospect, Bucyrus 44820
(419) 562-2781

CRANBERRY TOWNSHIP BRICK ARCH

80 acres

One-half mile south and one-half mile west of New Washington

Of considerable historical and engineering interest is this brick "arch" or conduit completed in 1892 as a drainage ditch for an extensive cranberry marsh. It is one of the three major outlets of the former marsh which created engineering and construction difficulties.

The glaciation map shows the township was practically covered by temporary lakes formed when streams were blocked some 11,000 or more years ago by the glacial end moraine on the south and the ice on the north. The lakes gradually changed to marshes which, in turn, were drained by early settlers to create tillable fields. The Harrer farm is typical of those in the former marsh area.

Four feet in diameter, the conduit is more than one-half mile long and 25 feet deep. A surface ditch 12 feet deep remains over the tile. No other such drainage improvement exists in Ohio, according to the Soil Conservation Service. Although the arch is in excellent condition after all these years, it is threatened somewhat by the roots of trees above, and the possibility of settling because of a dam constructed below the outlet to provide water for the village.

There is no charge to view this structure. To quote the owner, "Best thing to do is park at the town reservoir on the north side of Chatfield Center Road or Reservoir Road one-half mile south of New Washington and crawl down in the open ditch and look at the discharge end on the south side of the road. The entrance is one-half mile due south at the end of another ditch."

Mr. Herbert Harrer
New Washington 44854
(419) 492-3571

CUYAHOGA COUNTY

BUCKEYE TRAIL

34 miles

From SR 174 at Cuyahoga County line near Mayfield to Peninsula

The trail crosses through several of the Cleveland Metropolitan parks, including North Chagrin, South Chagrin, Bedford, and Brecksville reservations (see descriptions following). It also follows some country roads and highways as well as park drives, and in these instances hikers should use extreme care, walking on the left berm wherever possible.

The trail through the parks is through forests that are very beautiful at all seasons. It crosses many valleys abounding in wildflowers.

For maps and further information contact:

Buckeye Trail Association, Inc.
P.O. Box 254, Worthington 43085

CLEVELAND METROPOLITAN PARK DISTRICT

18,000 acres

Encircling Greater Cleveland like a garland of green, the Metropolitan Park System, with more than 18,000 acres in 10 major reservations and four connecting parkways, provides a variety of outdoor education experiences as well as pleasure. The physical environment has many features of interest in earth science, particularly the rock formations and stream pattern. The flora and fauna of river, lake, flood plain, swamp, hillsides, upland, and rock cliffs are preserved in as natural a condition as possible in view of the fact that the district receives as many as 16 million visits each year.

Advance reservations are necessary in order to secure the services available. The park areas are described in more detail as they form an east-west "emerald" chain around the city.

For reservations contact: *Cleveland Metropolitan Park District*
2048 Standard Building, Cleveland 44113
(216) 621-1054

For Girl Scout facilities: *Camp Registrar*
Lake Erie Girl Scout Council
1001 Huron Road, Cleveland 44115
(216) 241-3180

BEDFORD RESERVATION-TINKERS CREEK GORGE

1,335 acres

Along SR 14, Egbert Rd., and Tinker's Creek

A spectacular portion of Cleveland's "Emerald Necklace" is found in this park. Geologically, the gorge embraces the type locality for the Bedford shale and Berea sandstone of the Mississippian period lying above the Devonian shale. Deep erosion by Tinker's Creek since glaciation is responsible for the scenic topography. A mature beech forest with sugar maple, the oaks, hickory, and ash in association is found on the upland. Yellow birch, hemlock, and mountain maple grow transitionally in the flood plain valley or north-facing slopes. A more detailed description of the gorge is included in the Nature Preserve section.

Several picnic areas, a Girl Scout camp, foot paths, bridle paths, and park roadways provide access and facilities for study of many habitats.

A Girl Scout cabin providing sleeping facilities for 26 persons and cooking facilities may be rented during the week, spring or fall, by nature study classes.

BIG CREEK

534 acres

A ribbon along US 42 (Pearl Rd.) to Snow Rd.

This narrow strip of park land extends along a tributary of the Cuyahoga River. The stream has eroded through the upper Devonian Cleveland shale and there is a good exposure available for study. Upland trees are the beech-maple forest type. Many shrubs and wildflowers are found in association. Hiking trails have been developed and facilities are available.

BRADLEY WOODS

768 acres

Between Center Ridge and Lorain roads, entrance on Bradley Rd.

Near the Lorain County line, this park is a western extension of the "Emerald Necklace." Perhaps the outstanding ecological features are the extensive swampland, which has standing water well into summer in a wet season, and the stream dissection exposing the Berea sandstone of early Mississippian age. This is a good site for the study of birds and wildflowers, swamp forest, and aquatic animals.

BRECKSVILLE RESERVATION

2,768 acres

East of US 21, south of SR 82, west of Cuyahoga River near Brecksville

The vegetation on this preserve provides good examples of oak-hickory, beech-maple, and hemlock glacial relict forest types. The Harriet Keeler Memorial Woods is in the northwest section.

Geology field trips are often led in this area because of the rock exposures. From top to bottom are 20 feet of the

CLEVELAND METROPOLITAN PARK DISTRICT (Cont.)

Mississippian age Berea sandstone, 65 feet of Bedford shale, 25 feet of Cleveland shale containing giant armored fish fragments, and 12 feet of the Chagrin shale where fossils are abundant.

A trailside museum, a labeled nature trail, and the services of a naturalist guide are available, the latter by appointment. An asphalt-paved "Trail for All People," designed for the handicapped, was constructed in the Brecksville Reservation and is named in honor of Harriet Keeler. A granite boulder and bronze plaque bears a message challenging future generations to love and care for the woods which she loved.

A Girl Scout camp, which has a dormitory sleeping 28 persons and a lodge for 20 persons, each containing food service facilities, may be rented during the week in spring and fall months by nature study groups.

EUCLID CREEK
351 acres

Along Glen Ridge Rd. and Euclid Creek from US 6 south to Anderson Rd.

A narrow valley about four miles long dissected by a fast-flowing stream provides the physical environment for this park. Good exposures of the Mississippian shales and sandstone as well as the older shales of Devonian age are revealed in the slopes. The area is forested with mixed hardwood trees and some relict northern species. Wildflowers as well as trees, shrubs, and evidences of small animals may be seen from the trails.

HUNTINGTON RESERVATION

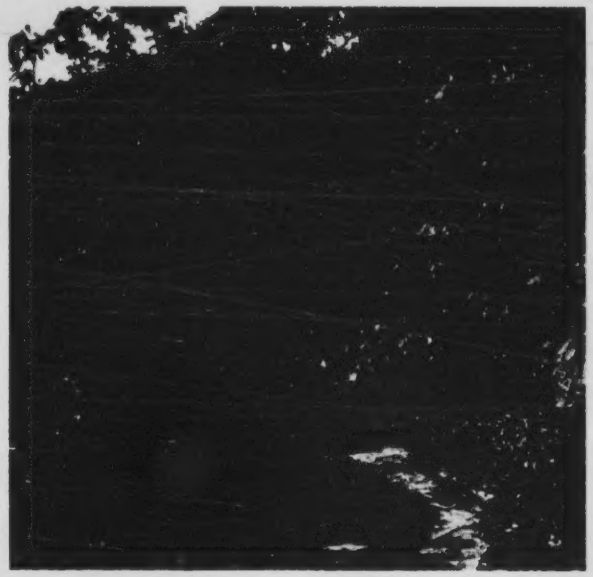
See Lake Erie Junior Nature & Science Center.

NORTH CHAGRIN RESERVATION
1,719 acres

East of SR 91 and south of US 6

This northeast link of the "Emerald Necklace" around Cleveland is along the Chagrin River. The river has dissected the shales and sandstones to form rugged topography. The "green" is provided by a mature beech-maple climax forest. Williams Memorial Forest, a wildflower trail, a labeled nature trail, and a trailside museum are significant features. Sunset Pond and tributaries draining into the river provide water habitat for plants and animals. A nearby waterfowl sanctuary has observation platforms to view resident and migratory birds.

Long and short trails, numerous picnic places and shelters are additional conveniences for field trips. A resident naturalist is available to assist teachers in interpreting all phases of the environment to classes. A Girl Scout cabin, Intergrove, sleeps 30 persons and has cooking facilities. This may be used by study groups during the week in spring and fall.



ROCKY RIVER RESERVATION
5,614 acres

From Detroit Ave. in Lakewood through Fairview, Brookpark, Berea, and Strongsville south to Egerton Rd.

A long ribbon, a mile or more wide, extends for several miles along the river to form the western portion of Cleveland's "Emerald Necklace," embracing over 5,000 acres of valley and hillside. Geologically interesting are the good exposures of the Devonian age Cleveland shale, the flood plains, alluvial deposits, typical erosion patterns of the shale, and the fossil fish horizon.

Forest associations include original remnants of swamp, beech-maple, and mixed hardwood types. Small ponds, a lagoon, and the meandering river furnish habitat for aquatic plants and animals. Of historical interest is the site of Erie Indian fortifications, a mill and mill race.

A resident naturalist and a trailside museum, nature and special wildflower trails, and many picnic spots make this a desirable site for visitation. Wintergreen Cabin, under Girl Scout jurisdiction, sleeps 24 persons and has food service facilities; it may be rented by nature study groups.

SOUTH CHAGRIN RESERVATION
614 acres

Near Chagrin Falls east of SR 91, west of Chagrin River

This property contains a segment of the river and its valley with exposures of Mississippian age sandstones and shales, flood plain, alluvial deposits, and other geologic features. Such intriguing spots as Table and Squaw Rock and Sulphur Spring should be of interest. The Cleveland Natural Science Lodge and museum and an arboretum are additional attractions at this site.

CLEVELAND ZOOLOGICAL PARK

125 acres

On West 25th St., Fulton Rd., Denison Ave. and (main entrance) Brookside Park Dr.

Within easy reach of hundreds of school classes is this outdoor education area recognized as one of the oldest and largest in the Midwest. By special arrangement all school classes, many youth agency groups, and senior citizen, biology, and natural history clubs within the Cleveland Metropolitan District are admitted free. By prior arrangement, school classes from within the park district may ask for guided educational tours conducted by knowledgeable science teachers.

From the tiny hummingbirds to the Nile hippopotamus, from the monkey and cat buildings to the children's farm and the bird building, this tremendous facility, with prior exploration and planning, can provide a wealth of fortifying experiences for classroom instruction.

In addition to the animals from around the world, teachers may use the wooded areas with labeled trees, the water habitats, and the general environmental aspects of the zoo world to augment indoor educational experiences.

Director, Cleveland Zoological Park
Cleveland Zoo
Brookside Park Drive, Cleveland 44109
(216) 661-6500

GARDENVIEW HORTICULTURAL PARK

16 acres

On SR 42, 1½ miles south of SR 82, Strongsville

Gardenview Park is an excellent example of a long-neglected parcel of land brought to beauty and productivity largely through the efforts of one man. For techniques and experiences of value in beginning a school garden, a visit to this site is recommended.

Five hundred flowering crabapple trees create a spectacular display in early May, but they are only a part of the plantings. Landscape beauty is enhanced by the great variety of species and settings of daffodils, azaleas, tulips, iris, poppies, tuberous-rooted begonias, dahlias, and numerous perennials. Two small lakes, fed by a stream flowing through the property, provide a habitat for waterfowl. Resident peacocks also frequent the area.

Although the park and arboretum are the dream and effort of the developer, individual memberships, civic groups, and garden clubs make contributions which hopefully in the future will permit a modest administration building and further expansion.

Harry A. Ross
16,711 Pearl Road, Strongsville 44136
(216) 238-6613

INDEPENDENCE SCHOOLS OUTDOOR EDUCATION CENTER

35 acres

In City of Independence in the Cuyahoga River Valley

The acquisition of a relatively undisturbed natural area has been the cause of an exciting new project in a highly industrialized and urbanized community. Located in the river valley, the property contains outcrops of Devonian shales and Mississippian sandstones and shales. Flood plain vegetation, good field succession areas in various stages, mixed hardwood forest on upland slopes, wildflowers, and small animals provide an abundance of material for ecologic study programs.

Two miles of trails have been developed, one of which leads to an excellent overlook of the Cuyahoga Valley and the Ohio Canal. Two small ponds (one stocked with fish) and an experimental bog have been developed. A small museum is being developed and a Cuyahoga Valley Watershed Study is housed in rooms adjacent to the main classroom.

Activity in the center has included field biology and ecology courses for secondary students and an outdoor education program for elementary children. Community involvement has been an objective, and adults as well as children are recognizing and appreciating the new instructional facility. Interested persons are invited to visit by appointment. Parking, a classroom, and shelter house are available at the site.

Mr. William Taylor, Director or
Miss Dianne Witwer, Curriculum Coordinator
Outdoor Education Center
Independence High School
6111 Archwood Road, Independence 44131
(216) 524-4124

LAKE ERIE JUNIOR NATURE AND SCIENCE CENTER

105 acres

Huntington Park Reservation, 28728 Wolf Rd., Bay Village (Cleveland)

This is a unique outdoor nature center showing living things in their natural habitats. Nature trails along lake, streams, in meadows, and woods show the remarkable wildflowers, the oak forest association of trees, many planted exotic trees, wild animals, and numerous kinds of birds.

There are conservation exhibits of outstanding value, constructed as "a result of the conviction that a child's curiosity is a precious thing." A planetarium, a curator's workshop, and classroom facilities complete the appointments.

The program is so effective in introducing children to their natural environment that many school districts use it

as a supplement to school science classes. The center is in the Huntington Park Reservation of the Cleveland Metropolitan Park District.

Director
Lake Erie Junior Nature and Science Center
28728 Wolf Road, Bay Village 44140
(216) 871-2900

SHAKER LAKES REGIONAL NATURE CENTER

275 acres

On boundary of Cleveland Heights and Shaker Heights

With this large acreage devoted to nature study, many types of habitats are available, including lake, stream, field, marsh, and ravine. The ravine has good rock exposures of shale and sandstone of Mississippian age. The area has a variety of trees and flowers, both natural and introduced. The animal population is varied. The property is surrounded by a surburban area, thus limiting the mammal population, but birds are abundant. Over 160 varieties have been sighted. This is the location of the former North Union Shaker Colony and some remnants of early Shaker construction remain.

An interpretive guide is available on weekdays for school groups. Saturday programs for children are available through the school year, and an extensive summer program is offered. Each Sunday a nature walk is held at the center.

Shaker Lakes Regional Nature Center
2600 South Park Boulevard, Shaker Heights 44120
(216) 321-5935

SIEDEL FUN FARM

83 acres

1½ miles west of Strongsville

Within easy access to thousands of school children is this delightful third-generation farm, conceivably a remnant of the historic Western Reserve territory. There are fields of wheat, oats, corn, and hay and 25 acres of pastureland for the animals. Eight acres of woodland have been retained for wildlife cover and a limited glimpse of the earlier mixed hardwood forest.

Farm tours and hayrides are the specialty. The daytime tours include a ride over 10 miles of trails and a visit with the animals, followed by a picnic or cookout at one of the eight camping areas. The animals are both wild and domestic and include chickens, pheasants, geese, cows, rabbits, skunks, buffalo, and many types of dogs.

For a combination of learning and fun, with opportunities to establish ecological relationships including man's place in the scheme of nature, this is potentially a valuable setting.

Siedel Fun Farm
21897 Westwood Drive, Strongsville 44136
(216) 238-6081

SOUTH EUCLID-LYNDHURST ENVIRONMENTAL CENTER

3 to 5 acres

4645 Mayfield Rd., South Euclid

This environmental center was established by two Brush Creek High School teachers who serve as coordinators. It is staffed and operated entirely by its membership, primarily students from Brush High School.

The center, which consists of a classroom and a laboratory, leases the facilities and land along Euclid Creek from the county library. It is largely a community project funded by community groups and a small grant from the Institute for Environmental Education, which provides training and membership in the Cuyahoga River Watershed Project.

The project began by student teacher teams doing water chemistry and bacterial studies of Euclid Creek, which has an access and a woodland area available for study. Other project subjects have been consumerism, zoning, ecological studies including limnology, and community services. Along with the wooded area, which has a short nature trail, and the stream, the members have established an organic garden, a recycling center, and a bicycle clinic. They have sponsored Earth Week at the library, an organic garden contest, and ecological trips to other places of interest.

Meetings are held at the center on Tuesdays at 4 p.m. Any teachers or students interested in further information, use of testing materials, and instructions may attend the meetings.

Head Librarian
County Library of South Euclid
4645 Mayfield Road, South Euclid 44121
(216) 382-4880

WARRENSVILLE HEIGHTS LAND LABORATORY

16 acres

Across from Senior High School

A beech-maple climax forest, a transitional mixed hardwood forest, and a meadow in natural succession vegetation are reached by developed hiking trails. A second area of eight acres is presently being used for elementary gardening. Classes may visit on weekdays only.

Land Laboratory Director
Warrensville Heights Senior High School
4270 Northfield Road, Cleveland 44128
(216) 752-8585

DARKE COUNTY

DARKE COUNTY STATE WILDLIFE AREA

315 acres

6 miles east of Greenville on SR 76

This area is situated in a productive agriculture area where glaciation is reflected in the slightly rolling recessional moraine and the heavy glacial neutral soils and glacial boulders. Seven ponds of 21 acres provide many species of fish and other aquatic animals and plants for study. The property is managed for such farm game species as pheasant, quail, rabbit, and fox squirrel. Oak and hickory forest type is found in the small woodland plots.

Division of Wildlife District 5 Office
Route 3, Xenia 45385
(513) 372-7668

GREENVILLE CITY PARK

90 acres

In the heart of the city along Park and Harmon drives

This property constitutes two distinct parks, one an outstanding city recreation area providing space and facilities for a variety of outdoor recreation programs. It includes a widely known horseshoe court.

Across Park Drive, which separates this first park area from the historically famous Greene Ville Treaty Memorial Park, is the actual site where Anthony Wayne, in 1795, with the diplomacy of a Kissinger and the patience of Job, succeeded in molding an agreement with the leaders of the various Ohio Indian tribes which opened the Northwest Territory (of which Ohio was a part) for extensive settlement. Treaty talks began in June around a council fire which, if kept burning for the designated period of time, would convince the Indians that their gods favored the treaty. The fire burned.

A large stone plateau flanked with concrete benches contains the "Altar of Peace," and a flame representing the original council fire is burned each year during the summer months to honor the agreement. The peace was built upon the commitment of the Indians to confine their hunting grounds within a line on the east following the Cuyahoga and Tuscarawas rivers to Fort Laurens, then westward by way of Fort Loramie to Fort Recovery and southward into eastern Indiana. This line is called the "Greene Ville Treaty Line."

In addition to the Altar of Peace is a cemetery and a replica of the large stockade constructed by Wayne to house and feed the signers of the peace treaty. This wooded treaty park, with its sassafras grove, large oaks, hickory, walnut, and conifer plantings, has been the scene of Boy Scout camporees in the past. Five lagoons and two lakes, which attract enormous numbers of geese and ducks, provide water habitat together with Greenville Creek, which meanders through the area.

A grassy knoll planned for pageants, flanked by replicas of block houses, backed by Lombardy poplars and faced by a beautiful lagoon is little used but literally invites school classes to reenact the monumental historical events.

Garst Museum, housing many pieces of historical value, and a Girl Scout Little House complete the tremendous complex of available facilities for educational ventures.

Not to be neglected is Fort Jefferson, located on SR 121 via Weaver Station Road, a much earlier fort commemorating the great efforts of the frontiersmen to forge a place for themselves in the Ohio wilderness, though undoubtedly at the expense of the lives of its original inhabitants.

Manager
Greenville City Park
Greenville 45331
(513) 548-1314

SPORTS HAVEN

92 acres

3 miles south of New Madison off SR 121

With advance notice, club members of the association conserving this plot for wildlife will take classes along trails. Signs of glaciation may be found in the rolling recessional moraine topography and boulder train deposits. Two lakes, abandoned cropland in a middle stage of natural succession, and beech woodland provide a variety of habitat for plants and animals. Recent plantings of conifers and multiflora rose have attracted many birds, some deer, and other wildlife.

A full-time caretaker, a camping area, picnic shelter, and clubhouse provide convenient facilities.

James Stanforth, Secretary-Treasurer
Darke County Fish and Game Association
1267 Highland Drive, Greenville 45331
(513) 558-5695

WAYNE LAKES

527 acres

6 miles southwest of Greenville on SR 121

Due to the foresight of the president of a company which began removing glacial sands and gravel in the early 1920s, a desirable recreation and housing area has been developed. The excavation process left 16 lakes ranging in size from five to 13 acres, totally about 100 acres. The steep banks were leveled and trees were planted.

The area is now owned by a corporation which sells lots for homes or cottages. In addition to studying the early physical features, which are glacial kames and eskers, and the conservation practices, groups may observe water plants and animals, plantations, and natural woodland. For free tour arrangements contact:

Lowell Vietor, Manager
Wayne Lakes, Inc.
1054 Main Drive, Greenville 45331
(513) 548-3807

DEFIANCE COUNTY

AUGLAIZE RIVER POWER DAM

15 acres

On SR 111, 4 miles south of Defiance on the Auglaize River

Of considerable potential interest from historical and ecological viewpoints is a 22-foot dam constructed by a predecessor of Toledo Edison in 1913 to supply electricity to the city of Defiance. The hydro plant augmented other power-generating facilities, such as the coal-fired boilers in downtown Defiance. Hydroelectric power has not been generated by this installation since 1962. The powerhouse on the east side of the river has since been stripped of its equipment.

River ecology, which includes the exposed dolomitic rocks, striated glacial boulders, flood plain vegetation, and water life, may be studied on limited land areas adjacent to the river on both sides, particularly during low water levels. No facilities are available.

The owner of the nursery south of the dam, Mel Chapman, is willing to act as a resource person to teachers upon request.

John B. Cloer, Manager
Auglaize River Power Dam
613 Third Street, Defiance 43512
(419) 782-2015

AU GLAIZE VILLAGE AND WOODS

120 acres

3 miles southwest of Defiance just off US 24

A short distance beyond the western boundary of a city rich in Indian lore, frontier activity, and expanding industry, the Defiance Historical Society has begun a reconstruction project to revive and maintain much of the area's colorful heritage.

Au Glaize Village has acquired a number of historic buildings and restored them to their original functions. These include an operating cider mill, a doctor's office, a village blacksmith shop, a church, a school, a railroad station, a Black Swamp cabin, and the village cook shed. More buildings, such as a museum of natural history and archeology, a military museum, a broom factory, a grist mill, and a saw mill are planned.

The Black Swamp Farm is an 80-acre tract adjacent to Au Glaize Village. The farm is on typical old growth Black Swamp forest land with stands of hickory and swamp white oak. A temporary pool is an excellent study area during the frog breeding season in April. The area is good bird habitat; woodpeckers are common. A plot survey of the flora and fauna would indicate typical regional biota.

Guide service is available and the fee for students in groups is nominal. Trails are being developed in both the Black Swamp and the Au Glaize Village areas.

Richard Helwig, Manager
Au Glaize Village
527 Nicholas Street, Defiance 43512
(419) 784-2744

CAMP EDWARD DRUMMOND LIBBEY

150 acres

4½ miles east of Defiance on SR 281

This Girl Scout resident camp is located on the Maumee River across from Independence Dam State Park. Originally a farm, it contains some natural growth of trees of the oak-hickory forest type, especially in ravines which have never been cut. Many kinds of conifers, particularly white and Austrian pine and tuliptree have been planted, achieving considerable growth in their 20 to 30 years. One trail leads around the camp giving access to the study of wildflowers and animal life, soils and stream action. A winterized lodge housing 40 persons is available. School camping or day field trips during school time are feasible.

Camp Registrar
Maumee Valley Girl Scout Council
2313 Madison Avenue, Toledo 43624
(419) 243-8216

CAMP FORT DEFIANCE

5 acres

6 miles northwest of Defiance off SR 15

This small property is adjacent to the Oxbow Lake State Wildlife Area. In addition to its own woodland, the diversified terrestrial and aquatic wildlife indigenous to that area may be studied from the camp. A winterized lodge with food service facilities for 16 persons is available. Use of the two properties for study purposes necessitates advance registration each time.

Camp Registrar
Maumee Valley Girl Scout Council
2313 Madison Avenue, Toledo 43624
(419) 243-8216

FAIRVIEW HIGH SCHOOL CONSERVATION LAND LABORATORY

5 acres

East of Fairview High School, Sherwood

A small pond serves as a nucleus for the management of a conservation area which will include forestry, wildlife preservation, conservation practices, pond studies, and recreation. Conservation classes have developed hiking trails and established a picnic area. Other schools are invited to observe the program as it progresses. Conservation students will conduct tours on the nature trails for younger classes.

Mark Welch
Route 1, Sherwood 43556
(419) 658-2186

FIVE MILE CREEK ACCESS

5 acres

5 miles south of Defiance on SR 111

This small area provides access to the power dam backwaters of the Auglaize River. A limited number of wildlife plantings, including multiflora rose, have been established. A few trees are present, some of the fruit varieties. The adjacent Auglaize River contains a varied fish population. Birds are present, and during spring and fall migration waterfowl may be observed on the river. These are wood ducks, mallards, black ducks, scaup, blue and snow geese, and Canada geese.

Division of Wildlife District 2 Office
952 Lima Avenue, Findlay 45840
(419) 422-6757

INDEPENDENCE DAM STATE PARK

606 acres

5 miles northeast of Defiance on SR 424

This park is a narrow strip of land five miles long lying between the Maumee River and the highway. A hiking trail traverses the old towpath of the Miami-Erie Canal, paralleling the river. One of the canal gates has been restored to its original condition. Of additional historic interest is the fact that "Mad" Anthony Wayne traveled this park on his famous march north, and the site of the Battle of Fallen Timbers is on up the river. Most of the vegetation reflects the water environment with sycamore, oaks, elm, and willow predominating.

Park Manager
Independence Dam State Park
Route 4, Defiance 43512
(419) 784-3263

OXBOW LAKE STATE WILDLIFE AREA

313 acres

On SR 15, 8 miles northwest of Defiance

Situated in the Big Swamp area of Ohio, which was formerly glacial lake bed, the area contains diversified terrestrial and aquatic habitats. Two ponds have been stocked with a wide variety of fish. In large Lake Oxbow, aquatic vegetation in the form of potamogetons, coontail, myriophyllum, elodea, cattails, and rushes are present. Moderately extensive marsh areas contain standing trees as well as typical marsh plants. Associated aquatic animal species such as frogs, turtles, snakes, and insects are abundant.

Terrestrial cover ranges from cropland to grassland to woodland. These support such upland game as quail, pheasant, rabbit, and perhaps some Hungarian partridge. The wooded area has good fox squirrel, ground squirrel, raccoon, and deer populations. Different types of wildlife plantings may be observed, including autumn olive, multiflora rose, and evergreens, which provide habitat for many kinds of birds.

Division of Wildlife District 2 Office
952 Lima Avenue, Findlay 45840
(419) 422-6757

SHAWNEE SCOUT RESERVATION

650 acres

Camp Lakota and Camp Neil Armstrong, both 2 miles south of Defiance on SR 66

Although this large property is near town, the woodlands give a feeling of remoteness and privacy. The Auglaize River borders the camps on the west; Powell Creek, a tributary, runs through it; a 40-acre lake lies in the center. These provide both ample study of stream erosional and depositional features and adequate plant and animal life.

The trees are oak-hickory forest type with a large number of pin oaks. In addition, pine plantations and transplanted hardwoods provide protection for many varieties of wildflowers, edible plants, and wildlife. Eleven deer have been seen at one time. The bird population is outstanding; it includes such upland birds as pheasant and quail, with waterfowl in the lake area.

A new primitive camp adjacent to Camp Lakota is being developed, to be known as Camp Neil Armstrong, a tribute to the spaceman, who was an Eagle Scout here. Meechaway Lodge and a new winterized training center at Lakota make this site a possibility for school camping.

Scout Executive
Shawnee Council, Boy Scouts of America
2375 Allentown Road, Lima 45805
(419) 227-2107

THE TREE FARM

78 acres

6 miles east of Defiance on SR 281 on left-hand side of the road

This property has many varieties of trees in the mature beech-maple forest association with a rich assortment of wildflowers and animal life typical of the area. Situated on glacial till plains near the great swamp province, the soils are rich in clay. A stream runs through the property, revealing the unsorted glacial deposit in its banks and the abundant flora as it flows into the Maumee River on the north edge.

No facilities are available, parking must be on the side of the road and the owner indicates no liability.

Mrs. Erma E. Greenler
1120 Wilhelm Street, Defiance 43512
(419) 782-6942

DELAWARE COUNTY

BIG WALNUT ECOLOGICAL CENTER

38 acres

Along Big Walnut Creek back of Big Walnut High School at 1216 Ross Rd., Sunbury

The Big Walnut FFA and Vo-Ag classes, under enthusiastic faculty leadership, have developed a flood plain and river terrace area of outstanding significance. Students in the conservation classes conduct tours on a one-mile trail leading from the school grounds through 20 stations which highlight ecological principles involving geology, forestry and reforestation, water as a resource and an erosional force, soil formation, wildlife management, succession, and plant adaptation.

In addition, the boys have created a natural outdoor classroom, a picnic and campground with shelter, a tree identification trail, erosion resistant steps, and an observation deck overlooking the valley where birds, rabbits, and deer may be observed.

The participants exhibit an unusual appreciation for their natural area, and their construction projects indicate an aptitude and willingness to contribute hard work and intelligence. This is a project deserving high recognition.

Manager
Big Walnut Ecological Center
1216 Ross Road, Sunbury 43074
(614) 965-2768

BLUE LIMESTONE PARK

16 acres

Off West William St., west of Elizabeth St.

This is a small city park designed for recreation. A few oaks are scattered throughout. Water-filled limestone quarries, in which swimming is no longer permitted, have little vegetation or other life.

However, one significant feature makes the park interesting for study. A fracture in the rock strata, known as a "fault," shows a displacement of the sides relative to one another parallel to the fracture. This fault is in the southwest corner of the park and can be traced by means of a cherty, nodular layer of rock which has been broken. This can be seen on the wall to the right of the fracture about six feet above the same layer on the left. Rubble partially obscures the fault.

City Manager
City Building
Delaware 43015
(614) 362-4354

CAMP LAZARUS

300 acres

On US 23, 2 miles south of Delaware

This large Boy Scout reservation has a multitude of advantages for the study of geology, zoology, botany, and their interrelatedness. The buildings are situated on a glacial till plain above the Olentangy River, but rugged topography has been formed in the erosion of shale and limestone rocks by a small tributary of the river. The cliffs and steep hillsides are Ohio shale, a carbonaceous, thin-bedded formation of Devonian age. The shale is further characterized by "ironstone" or more correctly, dolomitic concretions, which occur in the basal part of the formation. The contact between the Ohio shale and the Olentangy shale occurs at the foot of the hillside. On down the valley, outcrops of the Delaware limestone are exposed and create a picturesque little waterfall. Glacial erratics, large rocks carried down in the glacial material, are evident in the stream bed.

The property is almost all wooded: the top level with large oaks, beech, and maple; the lower levels with hackberry, hazel, cork elm, sycamore, and numerous other species of trees typical of flood plain or low-lying terraces. Bird species are many, as well as typical wildflowers. The stream and two impounded lakes furnish ample aquatic environment. Two training lodges, a large dining facility, and a large rustic lodge provide good space for school camping groups. Though the main campgrounds have been used extensively for 40 years, the site has tremendous potential for outdoor education.

Central Ohio Council, Boy Scouts of America
1428 East Broad Street, Columbus 43215
(614) 253-5513

COLUMBUS ZOOLOGICAL GARDENS

100 acres

On SR 257 northwest of Columbus above O'Shaughnessy Dam

A visit to the Columbus Zoo is potentially a delightful educational experience for all ages. It is an ideal school field trip or family outing at a reasonable cost with a free guide service available upon three weeks advance request.

The zoo has a large mammal section representing many areas of the world. A like number of birds; a reptile and amphibian collection of over 800 specimens, the largest of its kind in the world; and a large aquarium which includes native fishes, tropical and salt-water tropical specimens are outstanding attractions.

The zoo is open the year around from 10 a.m. to 6 p.m. in summer; 10 a.m. to 5 p.m. in winter.

Director
Columbus Zoological Gardens
9990 Riverside Drive, Powell 43065
(614) 889-8335

DELAWARE STATE PARK

7,378 acres

On SR 23, north of Delaware

A large earth-fill dam has created a reservoir of approximately 1,330 acres. The large acreage of parkland adjacent is mostly old field habitat with scattered beech-maple wooded areas. Many spots are undeveloped and afford good wildlife study areas. It is known as an excellent waterfowl and upland game region. Recommended for use from April to October. A naturalist is on duty from mid-June to Labor Day.

Park Manager
Delaware State Park
Route 1, Delaware 43015
(614) 369-2761

DELAWARE STATE WILDLIFE AREA

7,600 acres

8 miles north of Delaware and east of US 23

Considerable acreage east of the reservoir is retained for the protection of many kinds of wildlife. The numerous ponds and marshes are an attraction for waterfowl during spring and fall migration. Nesting on the property are mallards, bluewing teal, and wood duck. Shorebirds such as woodcock, snipe, and rail are frequently seen. Other inhabitants of the site are pheasant, quail, rabbit, fox squirrel, and deer in limited numbers. Aquatic plants and animals are numerous and accessible for study.

Many woodlots are interspersed among the bodies of water, the well drained areas containing oak-hickory forest type and the typical spring wildflowers. Miles of Osage orange and multiflora rose serve as field dividers and bird habitat. This is an excellent place to observe conservation practices for soil, water, woodlot, and wildlife.

Area Manager
Delaware State Wildlife Area
8589 Horseshoe Road, Ashley 43003
(614) 747-2922

GALENA SHALE TILE AND BRICK COMPANY

100 acres

East of Galena

The small town of Galena has been famous for its "colonial" quality brick since the early 1800s. The town square still contains the Stagecoach Inn and the Odd Fellows Hall which were constructed in those early days from clay scraped from nearby fields.

Galena's brick manufacturing operation continued to grow from that time. Moreover, in 1924 a rock formation known as the Bedford shale was discovered in a hillside a few miles from the plant. Experimentation indicated this shale, with its red upper layer and blue bottom layer, was capable of producing the strongest brick in use today. It is definitely one of the factors responsible for the quality of Galena bricks.

A visit to the plant includes a trip to the open-pit strip mining operation where the shale is loaded upon narrow gauge railroad cars and carried by rail under the highway and over Big Walnut Creek. An escorted tour through the plant during production hours will give students an opportunity to see the raw material, largely finely ground shale, sand, and water being mixed, molded, baked, and glazed ready for quality construction outdoors and in.

Plant Superintendent
Galena Shale Tile and Brick Company
Galena 43021
(614) 965-1925

GREENWOOD LAKE CAMP

87 acres

On SR 42 northeast of Delaware

This beautiful site on a winding 12-acre lake has been used by the Salvation Army for 46 years and has much to offer for outdoor education purposes. The lake was formed in 1873 by the property owner, Fred Vergon, for harvesting ice. With the change of cultural pattern the area became a pleasure park; it was purchased by the present owners in 1926.

In addition to the lake, the Ohio shale banks, and a railroad embankment, the area contains large oaks of the oak-hickory climax forest in a park-like camping arena. In the less disturbed woodland, 80 different species of trees and many spring wildflowers are reported. A recent historical review and ecology study by students of Ohio Wesleyan University provides an accurate up-to-date report.

Steps are currently being taken to winterize the camp for year-round use; this has been achieved already in the Frank B. Willis Memorial Shelter. Numerous cottages, a dining lodge, and a recreation lodge are available, as well as a picnic area and swimming pool in season.

Columbus Area Commander
The Salvation Army
138 East State Street, Columbus 43215
(614) 221-6561

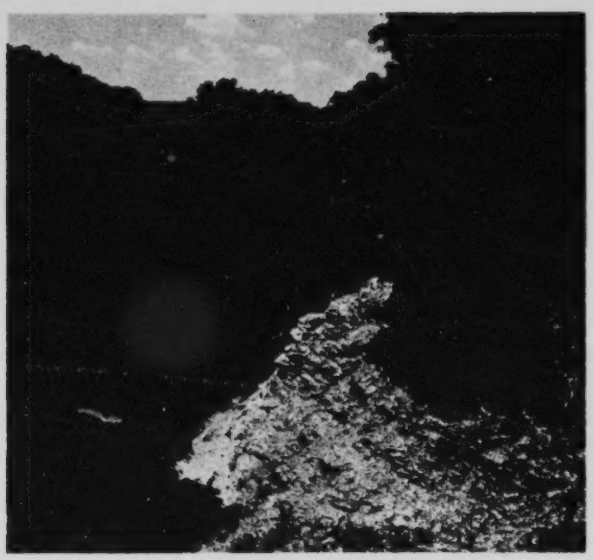
Resident Camp Director
Greenwood Lake Camp
340 Lake Street, Delaware 43015
(614) 369-4821

HIGHBANKS METROPOLITAN PARK

1,055 acres

North of Columbus on US 23, entrance at 9466 Columbus Pike

The fall of 1973 marked the opening of Highbanks Metropolitan Park, an area of considerable size, rich vegetation, and outstanding geological and archeological features. Although only a relatively small part of the planned development is completed, Highbanks undoubtedly will become



a favorite natural and recreational area in central Ohio. Public shelters, a parking lot, and a 2½-mile nature trail have been completed.

Highbanks receives its name from the 110-foot-high cliff of Ohio shale overlooking the Olentangy River valley. This cutbank is the result of the glacial meltwater river erosion which formed the present valley as the Wisconsinan glacier wasted back. From the top of the cliff is the most spectacular remaining view of the Olentangy River valley, responsible in part, at least, for the designation of the Olentangy from Delaware Dam south to SR 161 as one of Ohio's scenic rivers.

Noteworthy, also, is the horseshoe-shaped Indian earthworks identified as a remnant of the Cole Culture or "late woodland" Ohio Indians.

Much of the park is former farmland in various stages of succession. Wooded areas are largely oak-hickory. The river itself, with magnificent sycamores and other flood plain vegetation, contributes water habitat to the study areas.

For more detailed description of the Highbanks Scenic Nature Preserve dedicated under the Ohio Natural Areas system, see Nature Preserve section.

Metropolitan Park Board of Columbus and Franklin County
999 Park Road, P.O. Box 72
Westerville 43081
(614) 891-0700 - Central office
(614) 882-1796 - Naturalists' office

OLENTANGY INDIAN CAVES

91 acres

9 miles north of Columbus, 3 miles west of US 23 on Home Rd.

This historic and geologically significant site is visited by many school groups each year. The caves, formed by the percolation of groundwater through the cracks and crevices of limestone, give evidence of earlier use by Wyandot Indians. The cavern gradually enlarged through the millions of years since the limy ooze was deposited on a sea floor and uplifted as rock to its present level. Here the Indians found refuge from weather and enemies. Four levels are known within the caves. Visitors have access to three of these; they are 55, 75, and 105 feet below the surface of the ground.

On the site is "Ohio Frontier Land," an historic replication of a frontier town, which contains a hand-hewn log cabin, a general store, saloon (soft drinks only), bank, marshal's office, church, school, and other buildings needed for a growing settlement. An "Indian County" contains a number of units such as teepees, travois, a wigwam, drying racks, and an Iroquois longhouse, 30 by 60 feet.

The area is open daily during the summer and on Saturdays and Sundays during spring and fall. It is available for groups of 50 or more at other times by appointment only.

Ohio Frontier Land
1779 Home Road, Delaware 43015
(614) 548-7917

O'SHAUGHNESSY RESERVOIR

1,143 acres

12 miles northwest of Columbus on the Scioto River

The second of the dams built by the City of Columbus as a source of water, O'Shaughnessy has 829 acres of impounded water and over 300 acres in park land. Part of the area is still natural woodland with tree and flower study possible. Swamp habitats furnish plant and animal association of an hydrophytic nature.

Below the dam, with due precaution, studies of the limestone strata and weathering and fossil collecting are feasible. Just north of the municipal zoo, which might prove to be of interest for a multipurpose field trip, is a wildlife refuge where many species of birds are looked for each spring by ardent birdwatchers.

Director
Columbus Recreation and Parks Department
Room 124, City Hall, Columbus 43215
(614) 461-7410

WILLIAM POWELL EDUCATIONAL LABORATORY, BUCKEYE VALLEY HIGH SCHOOL

300 acres

On Radnor Rd. east of town

An extensive project for vocational and conservation education has been developed on this Delaware County farm. The land laboratory is divided into three study areas: a crop demonstration area consisting of 65 acres and about 200 acres of student cropland, which gives farm and non-farm students the opportunity to prepare the land, plant the grain, tend and harvest the crop produced, and retain the financial gain. Equipment and instruction are provided to assure as much success as possible.

The third area of 45 acres is being developed as an outdoor education area, both for instruction in conservation techniques and as an opportunity for high school students to introduce younger classes to the ecology of the area. Two nature trails have been developed, one self-guiding.

The land is level and has poorly drained soils composed of high lime glacial till. Soil wetness is the major management problem. Thirty-two acres are on woodland, one plot managed and the other reverting to undisturbed climax forest. A half-acre pond, stocked with fish, gives an opportunity to tag and measure fish growth. A rabbit population study, conducted by the students themselves, has proved informative and given means of developing wildlife management techniques. Wildlife feeding stations, plant succession plots, and drainage measures are additional study features. The total program deserves high commendation.

Paul A. Bodros
901 Coover Road, Delaware 43015
(614) 363-1340

USDA RESEARCH LABORATORIES

248 acres

On Main Rd. (Co. Rd. 213), 1 mile east of US 23, 4 miles north of Delaware

This extensive and spacious laboratory complex is situated on rolling glacial till plains dissected by the Olentangy River drainage system. Forty-eight acres house the 54 modern administrative offices and 30 laboratories; 85 acres are used for Forest Service research experimental tree plots and nurseries; 115 acres for Agricultural Research Service experimental tree plots and nurseries.

All three groups represented at the laboratory complex are under the administration of the United States Department of Agriculture. Each has separate responsibilities but all three cooperate in the use of equipment and information.

The Forest Service research group is responsible for forest insect and disease problems which include forest tree virus diseases, shade tree insects, effects of air pollution on trees, vascular diseases, hardwood cankers, heart rots and root diseases, and insect behavior. Of considerable interest is extensive research and its results pertaining to the Dutch elm disease.

A state and private forestry group cooperates with federal land managers as well as with state and private land managers. This group is responsible for putting the research into action.

The Agricultural Research Service group deals with shade tree and ornamental research which includes genetics, pathology and physiology.

Conducted tours are provided on a limited basis for serious students of biology or agriculture.

Chief of Laboratory
USDA Research Laboratories
P.O. Box 365, Delaware 43015
(614) 369-4471

ERIE COUNTY

THE BLUE HOLE

10 acres

North Washington St., Castalia

The "Blue Hole of Castalia" is famous throughout the country because of its beauty and seemingly bottomless depth. Although its source is usually termed "an underground river," geologic study indicates that it is a spring, its source the rainfall and drainage of more than 100 square miles, for the most part lying south of Castalia. This southern region is higher in elevation so that, as the rain water drains into surface sinkholes, small cracks and joints, it produces a network of solution channels in the limestone. With many thousands of these moving north, eventually the springs, geared to lower land beyond, come to the surface.

Nearly two million gallons of water per day come welling to the ground level to create the unusual pool. The water contains no air and fish cannot live in it until it splashes over rocks and waterfalls, picking up life-giving oxygen. A mill pond nearby is stocked with trout.

Of great interest also in Castalia is a 12-acre pond in the middle of town which does not freeze over during the winter because of the steady flow of water from underground. Waterfowl become incredibly numerous when nearby waters freeze over. Admission is free to children under 12 years.

Manager
The Blue Hole of Castalia
Castalia 44824
(419) 684-5303

CAMP TIMBERLANE

324 acres

On County Line Green Rd. near Birmingham

This Girl Scout property is a T-shaped piece of land with the east fork of the Vermilion River flowing throughout from southwest to northeast. The northern section is relatively flat farmland now in natural succession vegetation; the southern section has rolling topography, is considerably wooded with beech-maple forest type and ash, black walnut, and red elm in association.

The stream has eroded through the Mississippian sandstone, exposures of which may be found in its banks. A multiflora rose hedge provides cover for the bird population. Deer may be seen, as well as smaller wildlife. Wildflowers grow in the woodland and may be observed from the developed trails. A five-acre pond is rich in aquatic flora and fauna. Four winterized lodges, one housing 24 persons, two housing 36 persons each, and the fourth, 12 persons, are available. Adirondack shelters and tent units may be used when weather permits.

Use of the property for the day or overnight requires permission for non-Scout-affiliated groups. The fee for its use is determined by the facilities reserved.

Camp Registrar,
Erie Shores Girl Scout Council, Inc.
42639 North Ridge Road, Elyria 44035
(216) 324-6104 - Elyria
(216) 233-6412 - Lorain

ERIE COUNTY 4-H CAMP

21 acres

On Kelleys Island

This small acreage provides a tremendous opportunity for campers to study a variety of trees and shrubs, early spring wildflowers, many features of geology or earth science related to limestone formations, fossils of Devonian age, glacial grooves, shore action, and weathering. An abundance of animals includes pheasant, waterfowl, tern, raccoon, fox, snakes, turtles, fish, and snails. An Audubon group has recorded 70 different species of birds.

At the present time, the camp is scheduled for use from June 1 to September 1 by various groups. Recognizing the exciting potential for outdoor education, other schools may wish to investigate its availability. Transportation is by ferry from Sandusky or Marblehead. The camp is open only to prescheduled organizations.

Manager
Erie County 4-H Camp, Inc.
1200 Sycamore Line, Sandusky 44870
(419) 626-9440

GLACIAL GROOVES STATE MEMORIAL

3½ acres

Kelleys Island

The Glacial Grooves State Memorial, located on the north end of the island, is managed as a natural area for the educational interpretation of a glaciation phenomenon. The large grooves measure up to 12 feet in depth and 400 feet in length. They represent a relatively rapid moving mass of ice imbedded with very hard igneous or metamorphic boulders which scraped over the softer Columbus limestone layers to form the grooves. Recent excavations by the Ohio Historical Society removed a covering of glacial till to reveal the full extent of the grooves.

The area was dedicated in 1967 by the National Registry of Natural Landmarks.

Inscription Rock has unique pictographs carved on a limestone boulder by prehistoric inhabitants. It is preserved under a shelter so weathering will not eliminate its story for future generations.

Permission is not required to visit the area.

The Ohio Historical Society
Columbus 43211
(614) 466-2915

KELLEYS ISLAND STATE PARK

601 acres

In Lake Erie about 10 miles from the mainland

An exciting field trip to this park begins with a ferry ride from Sandusky or Marblehead. The area lies on the north shore and includes an excellent sand beach where water movement and shore vegetation may be observed.

Primary woody plants are in the hackberry-elm association, with some scrub trees, old fields, and small marsh areas for study of plants and animals.

Without a doubt the outstanding feature of the island is geologic in significance. Much of the park is covered by limestone quarries, abandoned long ago and now returning to native vegetation. There is much room for hiking, exploring, and collecting the fossils typical of the Columbus limestone.

Park Manager
Kelleys Island State Park
4049 East Moores Dock Road, Port Clinton 43452
(419) 797-4530

MILAN STATE WILDLIFE AREA

296 acres

On SR 113, 3 miles west of Milan

The Huron River bisects the area with approximately one mile of the river within the boundaries. In places the river has eroded perpendicular shale cliffs from six to 60 feet in height.

Over 200 acres are woodland, the primary tree species being red and white oak, hickory, cottonwood, ash, maple, and walnut. Animals include fox, red and flying squirrels, raccoon, rabbit, opossum, and woodchuck. Wood duck nest in trees along the river and occasionally a pileated woodpecker is seen.

Division of Wildlife District 2 Office
952 Lima Avenue, Findlay 45840
(419) 422-6757

NORTH CENTRAL BRANCH OARDC

335 acres

On Wahl Rd., 6 miles northwest of Castalia

On land donated for research purposes by an Owens-Illinois glass company owner, the North Central Branch of the Ohio Agricultural Research and Development Center (OARDC) has been experimenting on drainage, field surface preparation, crop varieties, and wildlife research since 1950. There are 130 acres of marshland and two 10-acre swamp-forest woodlots. Much of this may be observed from grass-covered dikes. These were built to control the artesian and Sandusky Bay flow of water, thus maintaining optimum habitat conditions for muskrat production and waterfowl hunting.

Blackbird research has been conducted for five years using landing, decoy trapping, oral sterilant measures, and the study of migration patterns for determining answers to the blackbird problem. In addition to cattail marshes and swamp forest woodlots, an old field segment, a hedgerow segment, and a great variety of water-associated animal life may be studied.

No interpretive personnel or facilities are available. However, wildlife researchers reside here part of the year and will conduct tours as long as they do not conflict with the research program.

Farm Manager
North Central Branch OARDC
Route 7, Vickery 43464
(419) 684-5037

RESTHAVEN STATE WILDLIFE AREA

2,210 acres

On west edge of Castalia, west side of SR 269

Resthaven is mostly in permanent grass and shrubby cover, with some woodland and crops in rotation. More than half has been strip mined for marl. The area lies in what was originally a wet marl prairie underlain by the clays of an ancient Lake Erie.

About 322 acres of ponds have been developed for rearing large fish populations. A great variety of waterfowl are to be found on them during spring and fall migrations. Wood duck, mallard, black duck, and blue-winged teal nest on the area. Woodcock nest also, and large numbers of migrants are present occasionally in the fall.

Of interest also are the many remnant prairie plants: big and little bluestem, Indian grass and prairie dock - relicts of the vegetation present when the state was new. Pheasant, quail, as well as muskrats and other fur species are present also.

Area Manager
Resthaven State Wildlife Area
P.O. Box 155, Castalia 44824
(419) 684-5049

SHELDON'S FOLLY

64 acres

Old Cedar Point Rdwy.

A managed woodland, a sand beach on Lake Erie, a waterfowl refuge pond, and natural marshes make this property a sanctuary of considerable renown. Cultivated fields, a tree farm section, multiflora rose hedge, and a farm pond have been man's contribution to its beauty and attractiveness to wildlife, particularly birds. In addition to the woodland of oak, hickory, ash, sassafras, and black walnut, approximately 8,000 hardwood and softwood seedlings have been planted. This extensive variety of habitat furnishes nesting sites and migration cover for a great number of waterfowl and other birds. Though privately owned, the property is visited by schools, Scout troops, and college classes on a regular basis at no cost.

Mr. D.E. Sheldon, Jr.
402 Northampton Court, Huron 44839
(419) 433-3116

FAIRFIELD COUNTY

BARNEBEY CENTER FOR ENVIRONMENTAL STUDIES

985 acres

In Fairfield County's Clear Creek Valley, 5 miles west of US 33

This large tract of land situated on either side of Clear Creek, a tributary of the Hocking River, was a gift to the Ohio State University from the late O.L. Barnebey, a Columbus industrialist.

Mr. Barnebey began acquiring land for a summer youth camp in 1926; the property was dedicated as Camp Indianola in 1928. For more than 40 years, thousands of children and young people from area churches enjoyed the facilities and nature-inspired programs conducted at this location.

In 1969 the property was dedicated as an environmental education center under the direction of the School of Natural Resources. Since then it has been used as an outdoor classroom for college students and for teacher-training programs. Plans for the future include the development of facilities and staff to provide a resident outdoor education program for elementary school classes.

The physical environment of Barnebey Center has been influenced by the fact that it is just beyond the line marking the furthest extent of glaciation in Ohio. The rolling topography is due both to the millions of years of erosion and the fact that Clear Creek, fed by glacial meltwater, cut a deep and frequently narrow valley through the resistant Black Hand sandstone. Approximately 300 rugged acres lie across the creek from the central facilities and provide opportunities to observe the weathering processes affecting the various horizons in the Black Hand formation, as well as the plant associations in a cool ravine environment, including hemlock.

Other parts of the property contain mixed mesophytic forest with large oak, tulip, beech, maple, and hickory. Rhododendron and laurel are abundant. Flood plain vegetation may be observed; fields in succession, beaver activity, deer and grouse, aquatic life in stream and lake, birds and other animals are available for ecological studies.

Day field trips, even a series of them, to conduct seasonal or contrasting plot studies, are encouraged for neighboring school districts. Winterized facilities permit resident outdoor education on a priority basis. Fees are subject to change and hence are not published.

Barnebey Center Coordinator
School of Natural Resources
The Ohio State University
124 West 17th Avenue, Columbus 43210
(614) 422-5589

FAIRFIELD UNION LAND LABORATORY

134 acres

On US 22, 7 miles east of Lancaster

A well-designed program for outdoor education has been developed on a farm purchased for use by this high school. Forty-five acres are farmed by vocational agriculture students, featuring contour and strip cropping on the rolling hills. An arboretum of 100 species, a natural wooded area of native hardwoods, and wildlife plantings highlight forest conservation and production. Two ponds and an adjacent stream provide access to water for aquatic studies. Three trails have been established, together with an outdoor classroom with tables and benches in the woods.

The area is situated on glacial end moraine with some Mississippian age sandstones and shales exposed in the wooded ravines. Nesting birds and wildflowers may be seen also. Part of the success of this growing program stems from the guidance of a Land Laboratory Council of citizens and school personnel.

Facilities are available in the school building. No-picnicking is permitted. Use is restricted to school hours.

Superintendent
Fairfield Union High School
Route 5, Lancaster 43130
(614) 536-7306

GENEVA HILLS

250 acres

7 miles south of Lancaster, reached via US 33 southeast, and Co. Rd. 86 and 67 west (Blue Valley Road)

Situated on the west edge of the Hocking River valley, this camp has many outstanding features for outdoor education. Geologically it lies on end moraine with Black Hand sandstone cliffs. A creek and a necklace of six lakes provide studies in erosion and deposition as well as aquatic wildlife. Botanically the site is well endowed with numerous acres of woodland, most of it hardwoods of maple, oak, hickory, wild cherry, black birch, and ironwood with many shrub trees of dogwood, hazel, sassafras, rhododendron, and laurel, with mosses and ferns in association. Wildflowers are abundant and include trailing arbutus, orchids, and spotted pipsissewa. Some of the woodland is native Virginia pine and some plantings consist of white and red pine. More than 60 species of birds are known, as well as numerous small animals.

A large winterized lodge contains food service and dormitories for 78. A frontier lodge and covered wagons provide quarters for as many more. The area is being utilized for resident school camping and training as well as Christian

education programs. Field trips also can be exciting and educational.

Richard S. Beidler
Presbytery of Scioto Valley
Route 8, 1380 Blue Valley Road, Lancaster 43130
(614) 746-8439
746-8512

GREENFIELD DAM AND STATE WILDLIFE AREA

46 acres

Reached from US 33, 4 miles north of Lancaster, or from SR 158, 1 mile west of Dumontville

This small dam is a part of an upper Hocking watershed conservation program. The acreage associated with it is in field and woodland. The ecology of the lake is similar to that of a large farm pond. The wooded area is primarily oak-hickory forest type.

Division of Wildlife District 1 Office
1500 Dublin Road, Columbus 43212
(614) 466-3337

LOCKVILLE LOCKS

2 acres

On Co. Rd. 20 south of US 33, beyond Canal Winchester

Seven stone locks in a one-mile segment of the Ohio Canal may be viewed from the old towpath at the little village of Lockville. The locks are as long as 120 feet, constructed from sandstone blocks quarried not far from the site. A restored covered bridge crossing the canal is adjacent to the lock at the east end of the series.

The canal proceeds through leased property beyond the park. The large locusts, cottonwoods, and willow trees in the moist canal bed provide an interesting habitat for studying plants and birds. Permission to explore this section may be obtained.

Parking is available on Lockville Road just south of the bridge over Little Walnut Creek or at the park. For a copy of the Ohio Canal Map, send 64 cents to: The Ohio Historical Society, Columbus 43211

Fairfield County Commissioners
County Court House
Lancaster 43130
(614) 653-1921

OLIVEDALE PARK

16 acres

Left off US 22 on Boving Rd. at Lancaster city limits

A nature trail along Hunter's Run where over 70 species of trees may be found, a large white oak in the park which is estimated to have been growing there when Columbus discovered America, large glacial erratics, and a rock wall with unusual concretionary boulders from the Black Hand formation are highlights of a trip to Olivedale Park.

The beautifully situated residence is a center for senior citizens. A multipurpose building with a seating capacity for 350 persons was started in the fall of 1973.

Park Superintendent
203 East Fair Avenue, Lancaster 43130
(614) 653-0418

RISING PARK AND MOUNT PLEASANT

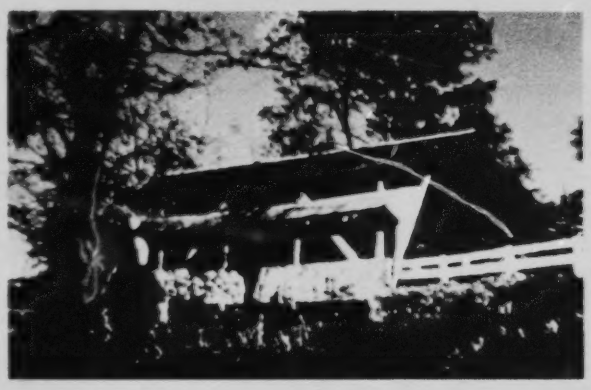
75 acres

On SR 37, North High St., Lancaster

This is a park of unusual scenic beauty, with its ponds, trees, and particularly a high hill with a cliff exposure of the Black Hand sandstone formation. A nature trail leads up to the top of the hill, known as Mt. Pleasant, at a moderate slope. Large trees of oak-hickory, beech-maple association as well as an abundance of shrubs, ferns, and wildflowers provide a rich vegetation for study.

A large glacial erratic near the top indicates that the glacier reached that point. Geologists recognize the glacial boundary as being only a few miles south of Lancaster. Chips of flint are found on the knob, giving plausible evidence to the possibility that this was an Indian campsite, perhaps as Indians returned from Flint Ridge with their supply of material. The view at the cliff overlooks the broad Hocking River valley.

Park Superintendent
203 East Fair Avenue, Lancaster 43130
(614) 653-0418



ROCK MILL DAM STATE WILDLIFE AREA

83 acres

2 miles north of SR 188, northwest of Lancaster

A 20-acre lake recently formed by damming the upper part of the Hocking River makes good fishing and aquatic plant and animal study. Upstream is a wooded area, an old grist mill built in 1824, and a covered bridge.

From the roadside near the bridge the eyes of the initiated can read an exciting geologic story. The narrow rocky gorge above the bridge, which becomes so narrow just below that a man could hop across it, was caused by a large volume of water draining a glacial lake. In cutting through the upper and more resistant part of the Black

Hand sandstone, the water formed the narrow gorge. A little below the bridge the valley widens and falls into a huge pothole. This was formed in the less resistant part of the sandstone as the heavy flow of water carrying sand and pebbles was caught in a whirlpool motion. Liverwort, mosses, and polypody fern growing on the rock indicate a consistently cool, moist environment.

Private property prevents exploration of the old mill, which has been used as a barn since 1906, as well as the river banks beyond the road.

Lake studies may be arranged through:

Division of Wildlife District 1 Office
1500 Dublin Road, Columbus 43212
(614) 466-3337

TARLTON CROSS MOUND

16 acres

On SR 159, 1 mile north of Tarlton

This area has been set aside to preserve for future generations an unusual Hopewell Indian mound constructed in the shape of a cross. A small park lies on one side of Salt Creek. A bridge and path beyond bring one to the mound and a wooded area containing mixed hardwoods and numerous shrubs. The stream, which has cut through glacial till and Mississippian sandstone and shale, is clean and sparkling. Creekside and forest studies are feasible.

The Ohio Historical Society
Columbus 43211
(614) 466-4663

FAYETTE COUNTY

CAMP GIPIWA

37 acres

On Zimmerman Rd., southwest of Washington Court House

Formerly farmland, this property is now used by Girl Scouts for day and troop camping. The topography is gently rolling; the site lies on Wisconsinan glacial recessional moraine bordered on the west by Rattlesnake Creek, a tributary of Paint Creek. The rock beneath the glacial material is Silurian age Niagara dolomite, but this is rarely exposed even at stream level.

The mixed hardwood forest contains many species of trees, shrubs, and wildflowers typical of neutral soils. Hiking trails have been developed, giving access to many habitats. A remodeled farmhouse and a roof-tree shelter on the hilltop are available.

Camp Registrar
Seal of Ohio Girl Scout Council
P.O. Box 24, 1295 Hubbard Road, Galloway 43119
(614) 878-1381

CAMP PINE

17 acres

5 miles southeast of Washington Court House

The Boy Scouts have reserved this small piece of land along Sugar Creek, which flows into Paint Creek a short distance downstream, for primitive camping. For a study of flood plain vegetation including the trees which line the stream, glacial soils underlain by Niagara limestone, rocks, and small animals in the stream bed, the site is adequate. Adirondack shelters are available at no cost.

Central Ohio Council, Boy Scouts of America
1428 East Broad St., Columbus 43215
(614) 253-5513

EYMAN ESTATE FOREST

298 acres

On Boyd Rd. and US 35 south of Washington Court House, 3 miles northwest of Ross-Fayette county line

This large forest is regarded as one of the few remnants of semi-prairie forest left in the state. The land is level, poorly drained, the soils formed in limy loam glacial till.

The trees are largely white and bur oak with hickory, beech, and other hardwoods in the association. The walnut has been almost entirely harvested. Although there is reported to be a virgin timber stand, the forest is now selectively harvested under the supervision of state foresters. The woods have not been pastured and support a rich herbaceous understory, especially early wildflowers.

An old log schoolhouse is located on the edge of the woods. It dates back to the original development of the large estate, a part of the Virginia Military District, and was used to educate the children of the farm help.

The estate was placed in a trust fund in the will of Jesse Eyman. Certain periodic bequests were designated in the will; the remainder of the Eyman trust income is used for the financial aid of deserving Fayette County residents.

Permission to student groups to visit the woods may be granted by contacting one of the trustees.

Jess Persinger
Route 2, Washington Court House 43160
(614) 948-2438

FRANKLIN COUNTY

BOYER PARK
11 acres

At the eastern terminus of Park St. in Westerville

Boyer Park consists primarily of second growth red maple, elm, and ash. A good cattail marsh of about one acre contains muskrat lodges and typical marsh plants and animals. School classes utilize the area to study forest and pond ecology. A self-guiding nature trail is maintained; the brochure is available at the Westerville City Building.

Parks and Recreation Department
Westerville 43081
(614) 882-2317

BROOKSIDE LAND LABORATORY
3 acres

In Brookside Estates school grounds on the west edge of Linworth

A small acreage has been developed to provide numerous experiences for students using this area. A quarter-acre pond was dug and its one- to three-foot banks naturalized with typical shoreline plants. It now supports aquatic life including fish, amphibians, snails, and insects. The surrounding land has a wide range of trees, shrubs and herbaceous material for study. Remnants of the last glacier in the form of large igneous and metamorphic boulders tell part of the geological story.

Instructional, informational, and identifying signs are located throughout the area. A sketch map is available at the Worthington Outdoor Education Office 300 West Granville Road, Worthington.

Principal
Brookside School
6700 McVey Boulevard, Worthington 43085
(614) 889-1155

CAMP GAN MAH TOV
28 acres

At Hoover Reservoir

This day camp area is situated on land rich with wooded ravines, abandoned orchard and conifer plantations bordering Hoover Reservoir. An inlet provides access for water activities including the study of aquatic plants and animals. Spring wildflowers are abundant; more than 80 have been identified. The bird population is excellent, especially during migration periods. Commendable are the conservation efforts which are represented in the 4,000 conifers planted since 1950. A lodge is available for inclement weather.

Manager, Gan Mah Tov
The Jewish Center
1125 College Avenue, Columbus 43209
(614) 231-2731

CAMP JOHNSON
87 acres

South of Camp Mary Orton, entrance marked on SR 23

Adjacent to Camp Mary Orton, this property contains a lodge and a deep, wooded ravine cut in the Ohio shale showing the characteristic jointing pattern and large concretions. Wildflowers in season, large trees, and small animals are abundant.

Godman Guild Association
321 West Second Avenue, Columbus 43201
(614) 294-5339

CAMP MARY ORTON
76 acres

On west side of US 23, 2 miles north of Worthington; entrance at former roadside park

This is a camp with a natural environment well suited to outdoor education or nature hikes. The camp area, containing fields where the buildings are located, is bordered by wooded ravines. There is considerable frontage on the Olentangy River. The creeks, river, and woodland provide plant associations typical of beech-maple-ash forests, and abundant evidence of animal life.

The geologic features include the contact of Olentangy shale and Ohio shale, steep rugged banks of thin-bedded Ohio shale showing a distinct jointing pattern, large "ironstone" (siderite or dolomite) concretions near stream level, plus a classic example of stream piracy.

Godman Guild Association
321 West Second Avenue, Columbus 43201
(614) 294-5339

COLONIAL HILLS LAND LABORATORY
8 acres

On the school grounds at the south edge of Worthington on Greenwich Ave.

A small stream has created a large east-west ravine on the school grounds. The plot contains some remnant trees of the original oak-hickory forest, particularly in the wooded ravine. Glacial erratics are found in the stream bed. Squirrels, raccoons, opossum, chipmunks, and a good variety of birds may be seen.

School Principal
Colonial Hills School
5800 Greenwich Ave., Worthington 43085
(614) 885-6202

COLUMBUS CITY PARKS

A wide variety of activities and interests are represented at the 104 park sites contained within the city park system, which cover more than 10,299 acres of land and water. For recreation, these areas meet the needs of myriads of people. Looking ahead, the system has purchased large acreages of land on the periphery of the highly urbanized city which will be developed in the future but which presently are noteworthy natural areas. Hopefully, much of this quality will be retained with development. These and a few other parks have been selected on the basis of distribution and potential use for outdoor education purposes. For further information contact:

Director
Columbus Recreation and Parks Department
Room 124, City Hall, Columbus 43215
(614) 461-7410

ALUM CREEK PARK
102 acres

On Mock Rd. one-half mile west of Sunbury Rd. in northeast Columbus

This undeveloped park is quite desirable for nature field trips. Along a narrow trail east of the picnic area bordering Alum Creek, easy access to the creek permits study of plants and animals. Large oak, hickory, and wild cherry trees and many smaller woody plants may be seen from the trail. Following it south one encounters a small stream flowing into Alum Creek. Glacial till is exposed in its banks; erosion and depositional features may be observed as well as flood plain vegetation.

BIG RUN PARK
277 acres

Entrance west of St. Stephen the Martyr School on Clime Rd., in west Columbus

This is one of the largest Columbus city parks. It extends through forest, stream, and old field succession. A stand of beech-maple and oak forest along the creek and on the hillside provides a good natural area for observing birds, squirrels, and many plants. An old trail goes up the hill and along the forest edge giving access for woodland studies. Recently developed, the park shows little encroachment.

BIG WALNUT PARK
136 acres

Along Big Walnut Creek north and south of Livingston Ave.

This city park has been reserved as a green island in a heavily populated urban district. The physical environment associated with a glacial stream provides a marsh habitat for over 120 species of birds as well as wild hyacinth and other water-associated plants. The flood plain level also contains an avenue of sycamores. Oak-hickory woodland with walnut trees on the eastern cutbank of the valley gives protection to small animals and plants.

This has been the site used by Ohio State University students for frog and bird study. Trails give access to both sides of the stream. The best time for other groups is from May 1 through October.

CHERRY BOTTOM PARK
94 acres

Three-fourths mile north of Morse Rd. on the west side of Cherrybottom Rd.

This park includes 44 acres of wooded hillside south of Big Walnut Creek and extends west and behind the water treatment plant. It is nicely wooded along the bluff as well as in the bottomlands along the creek.

The northern portion of the park, north of Big Walnut Creek, is mostly flood plain and its anticipated use is for active recreation as well as boat launching in the pool backed up by the water plant dam.

FRANKLIN PARK
100 acres

In east Columbus from 1500 to 1800 E. Broad St., and south

Franklin Park is one of the oldest landmarks in Columbus, having served as the first Ohio State Fairgrounds for many years. It is also the site of the historic Veterans of the Civil War speech by General William Tecumseh Sherman.

The park contains many recreational facilities, and for the botanist or horticulturist there is a conservatory of exotic plants from many parts of the world. In addition, the park provides an opportunity to study a wide variety of trees, native and introduced, which include conifers, sweet gum, and oaks.

Though located in the heart of the city, the park serves as an outdoor oasis for adults, family groups, and children participating in the supervised day camp or recreational activities.

GLEN ECHO PARK
4 acres

At Parkview and Cliffside Dr., east of Indianola Ave., north of Hudson St., in north Columbus

This small city park lies in a ravine cut by a small stream in Ohio shale. Picturesque with its stone bridges and steep slope, this little plot provides an opportunity to study shale

COLUMBUS CITY PARKS (Cont.)

strata, stream erosion and deposition, glacial erratics, sulphur springs, vegetation, and squirrels. Segments of the hillside are wooded with beech-maple, oak, and cherry trees, with sycamores at the flood plain level. It is an ecological study oasis in the heart of a crowded residential district.

GRIGGS RESERVOIR

Land - 195 acres Water - 363 acres

On US 33, northwest of Columbus, along the Scioto River

This extensive park area extends for a mile north of Griggs Dam, an early structure built to supply water for the City of Columbus. The river, the fossiliferous limestone rock exposures on its banks, the forest remnants, and migrating waterfowl provide ample material for ecological studies. Facilities are available from May to October.

HAYDEN RUN FALLS

2 acres

On Hayden Run Rd. just beyond the bridge crossing the Scioto River off US 33, northwest of Columbus

In an unmolested, wooded and steep, rock-walled ravine lying astonishingly close to a housing development is a 30-foot waterfall. The Devonian age Delaware and Columbus limestones forming the walls and the falls indicate that this is a hanging tributary of the Scioto River, a situation in which the small stream was stranded by the formerly rapidly eroding river resulting in falls now several hundred feet back. Other geologic features include fossils, stream erosion and deposition, slump blocks, jointing patterns, and upon occasion, a portion of the stream disappearing above the falls and reentering the stream well below the falls.

The flood plain and hillside vegetation as well as aquatic life and opportunities for testing water quality add to the value of the site for educational ventures. The steep banks require reasonable care and supervision.

Admittance by written permission only.

HOOVER DAM AND RESERVOIR

Land - 930 acres Water - 3,843 acres

On Sunbury Rd., north of Central College

This is a water supply source for the City of Columbus. The dam itself is mainly an earth-filled structure with a central cement spillway. It has dammed Big Walnut Creek so that a lake 8½ miles long has been created, with the surface at an elevation of 890 feet.

The public lands surrounding the reservoir, some in Delaware County, provide opportunities for nature study and recreation. There are many sites for study of birds, wildlife habitat, native Ohio trees, and other plants. Plans for future development indicate that wooded terrain near the lake will not be disturbed.

OLENTANGY PARKWAY

358 acres

Along the Olentangy River; Whetstone Park north to SR 161 at Worthington

This park development is intended to preserve the natural character of the land along the Olentangy River. The general area for nature study is to be located between the proposed Olentangy Freeway and the Olentangy River to the east.

There is a streamside access with many groups of trees along the natural course of the stream. Recreation development areas are planned at two locations: one just north of Henderson Road west of the proposed freeway and a second area west of Olentangy River Road and Tangy Drive.

A 30-acre quarry lake just east of Tangy Drive is included in the proposed development. Until recently this was the site of the Olen Gravel Pit.

THREE RIVERS PARK

390 acres

Southeast of the intersection of Williams Rd. and I-270

This is a new city park, basically undeveloped. Its main feature is the junction of three of the rivers that pass through Columbus: Alum Creek, Big Walnut Creek and Blacklick Creek. The area is low bottomland and is the scene of frequent flooding during spring high water. It is well wooded in the vicinity of the intersection of the streams, and there is a woodland tract located on the bluff overlooking Blacklick Creek. Several small lakes are already on the site, and light boating, fishing, and an interconnected system of streams and lakes are planned for the area.

It is an ideal place for the study of the ecology of streams as well as aquatic and terrestrial plants and animals.

WHETSTONE PARK

161 acres

Off North High St. in Columbus on Hollenback Dr. west of 3500 block

Extending along the east side of the Olentangy River, Whetstone Park is excellent for the study of many facets of environments. The valley profile of the river shows the effect of glacial stream erosion, with its cutbanks, flood plain, terraces, and deltaic deposits. Exposures of the carbonaceous Ohio shale bedrock may be studied. Wooded natural areas, wildlife plantings, many species of birds, hiking trails, and access to the perennial and rose gardens give the area considerable advantage for a multipurpose field trip.

DEMONSTRATION SCHOOL FOREST AND LAND LABORATORY

100 acres

At 500 Morse Rd., one-half mile west of I-71 north, Columbus

With supporting funds from an interested conservation group, land long owned by the State Department of Education now serves as a model for school land laboratory development. Advantageously located in central Ohio, this former golf course contains a stream, marsh, ponds, and a beech-maple climax forest which may be studied by an educator seeking ways to begin a dynamic environmental education program.

A variety of resources include four loop study trails with significant sites marked with numbered posts, garden plots, compost heap, Christmas tree plantation, soil profile pits, and wildlife management areas. Stream and woodlot management, natural succession, flood plain vegetation, and the geology, aquatic life, and chemical properties of streams can also be studied. The area contains almost any type of habitat to be found on a school site in Ohio.

Facilities include a sturdy shelter house for group work or play.

Supervisor
Environmental Education
Ohio Department of Education
65 South Front Street, Columbus 43215
(614) 466-2761

FLINT RAVINE

40 acres

On the northwest sector of the Pontifical College Josephinum property, north of Worthington

Flint Ravine, also known as Glen Mary Ravine, intersects US 23 about one-half mile north of I-270 interchange and extends generally southwestward to the Olentangy River. The cut, exemplifying strong early erosion forces, exposes the two lowest levels of shale lying above the Delaware and Columbus limestones. The lower of these, a blue-gray, clay shale, is known as the Olentangy; the next higher, a dark thin-bedded carboniferous formation, is the Ohio shale. The latter formation contains pyrite and "ironstone" concretions, particularly in the lower 50 feet.

Indigenous trees, flowers, and shrubs are abundant, including good examples of black walnut, beech, and several varieties of oak. Extensive reforestation is evident south of the ravine.

Rector
Pontifical College Josephinum
Worthington 43085
(614) 885-5585

FRIENDSHIP PARK

22 acres

Off Oklahoma Ave. in Gahanna (south of SR 317, Granville Rd., on High St., left on Clark, right on Oklahoma)

This amazing little city park at the confluence of Rocky Fork and Big Walnut creeks in Gahanna provides rich opportunities for observing natural relationships.

The two streams have cut through the glacial till deposits and the underlying Ohio shale. Cutbanks, broad terraces, and flood plains show typical erosional and depositional patterns of meltwater streams. Seasonally an interesting gravel bar is deposited by Rocky Fork as its flood waters enter the parent stream.

Water-loving flood plain vegetation includes large sycamores, hackberry, and basswood trees. A portion of the park is grassed, and grassed walkways lead along a succession trail to the mature trees on the banks of the creeks. A good variety of spring and fall wildflowers, including carpets of wild ginger, are present, and many edge-of-forest birds are consistently in view. Reflecting the influence of the city's special distinction – "the Herb Center of the World" – Friendship Park has developed a sizeable herb garden.

Man's environmental impact can be studied by testing and comparing the water of both creeks. The effect of a storm sewer draining into Rocky Fork just above the confluence might have a particularly interesting story to tell.

Park Manager
Municipal Building
Gahanna 43230
(614) 471-6917

GAHANNA WOODS PARK

101 acres

On Taylor Station Rd., east of Gahanna

In order to preserve an unusually good woodland in close proximity to a growing metropolitan area, the City of Gahanna and the State of Ohio purchased a property where development was imminent. The city property consists of rolling fields, now in succession, cut by two streams and bordered with shrubby fencerows. The area will contain park facilities and possibly a nature center, and will serve as a buffer zone for the adjacent state-owned woodland. A variety of interesting plot studies could be made on the property. (See Nature Preserve section for a description of the wooded area.)

Park Manager
Municipal Building
Gahanna 43230
(614) 471-6917

GRANDVIEW HEIGHTS OUTDOOR EDUCATION AREA

10 acres

On Goodale Blvd. at Grandview Ave.

This small city park, half of which is on mowed, level ground and used as a play and picnic area, contains several wooded acres on a hillside. The hillside is a cutbank of the Scioto River connecting the flood plain to the terrace

above. Marked trails provide access for mixed hardwood tree study. A guide is available at the school library.

Principal
Robert Louis Stevenson Elementary School
1065 Oxley Road, Columbus 43212
(614) 294-3155

GREEN LAWN CEMETERY

341 acres

Southwest Columbus, off I-71 at Greenlawn Ave. west

Birdwatchers and school groups have been enthusiastic visitors to this famous area for many years, especially during migration seasons. Three thousand large trees and an abundance of smaller shrubs and plants shelter the birds. The older plantings are most rewarding. Owls are often found in the conifers. The trees are valuable also for a study of dendrology. A small pond which lies behind a row of large mausoleum buildings is frequently an excellent place for observation.

Green Lawn has been a burial place of central Ohio citizens for 126 years, which means there are some very old gravestones to be examined for historical interest. Geologically, most of them are a hard igneous rock known as granite, highly polished, the kind of rock which resists weathering. A comparison of these with the limestone and sandstone markers, all of which are dated, makes an interesting study for earth scientists.

A carefully conducted trip through this area may help students respect and appreciate all aspects of the venture: the final resting place of more than 126,000 people, many of whom have made great contributions to the history of Columbus; the quiet environment which attracts congregations of birds and other small animals to the shelter of the vegetation; and the memorials which tell the perpetual story of Columbus and its environs.

Edward N. Sloan, Secretary
Green Lawn Cemetery Association
1000 Greenlawn Avenue, Columbus 43223
(614) 444-1123

INDIAN RUN RAVINE LAND LABORATORY

9 acres

Just off SR 161, back of Dublin (Washington Local) schools

Indian Run Ravine is a small outdoor education area which contains many significant natural features. The geology is characterized by headward stream erosion with waterfalls, steep limestone walls containing a small solutional cave, underground stream in rainy season, and fossils.

The ravine shows stream deposition as well as erosion including a short "yazoo" or backwash area. Many native Ohio trees including large sycamores and a profusion of wildflowers, mosses, ferns, lichen, fungi, and small water and land animals provide a choice study area.

The trails are narrow and not too distinct, requiring supervision for continued protection of plants as well as safety. Notebooks explaining the area may be procured for study prior to field trips.

If other schools are to continue to be granted permission to share this choice natural area, it is imperative that students comply with the restrictions imposed. Visitors must remain on paths in an orderly fashion staying completely away from the north side of the narrow valley.

Principal
Indian Run Elementary Building
144 West Bridge Street, Dublin 43017
(614) 889-8338

INDIAN VILLAGE CAMP

8 acres

On west side of Scioto River near Griggs Dam

This site has long been used as a day camp for City of Columbus children. Situated on the banks of the Scioto River and containing a steep limestone rock ravine and stream, the property could well be used for earth science studies. An overlook of the Marble Cliff Quarries, two picturesque waterfalls, an adjacent mixed hardwood woodland with wildflowers, and small animals add to the study possibilities. Two winterized lodges are available as well as necessary facilities.

Director
Columbus Recreation and Parks Department
Room 124, City Hall, Columbus 43215
(614) 461-7410

JEWISH CENTER OUTDOOR AREA

50 acres

Between I-70 and College Ave. Entrance at Jewish Center

When Interstate 70 was plotted, it was learned that it would create an isolated area on the west bank of Alum Creek. The north boundary of the "island" belonged to the Jewish Center, which arranged to lease the entire area for a token fee. Two lakes with safe shorelines and a natural amphitheater were developed from the freeway borrow pits.

Now a bridge, an arboretum, nature trails, and trees bordering the mile of frontage on Alum Creek all make this 50 acres of previously inaccessible land a good day camp site, a bird sanctuary, and wildlife refuge. May through October are designated as the months most desirable for programs.

Manager
The Jewish Center
1125 College Avenue, Columbus 43209
(614) 231-2731

MARBLE CLIFF QUARRIES

1,000 acres

Entrance south on Trabue Rd. west of the Scioto River bridge

This operation covers many acres of land which provide valuable geologic and ecologic study as a result of limestone quarrying. Because of continuing quarrying operations and the precipitous cliffs it is available only to special groups by permission.

The Columbus limestone, a Paleozoic formation deposited in warm interior seas during the Devonian period of geologic history, has about 40 feet of exposure within the quarry. Economically this is one of the important limestones of the state, being used for flux, buildings, ballast, roads, concrete, lime, fertilizer, and in the manufacture of glass. The formation is evenly bedded, strong, occasionally crystalline, ranging in color from buff to blue, the former predominating.

A "bone bed" made up of fragments of fish is found near the top of the formation, marking a change in the environment of the sea in which they were deposited. Below the bone bed the formation is very fossiliferous, containing an abundance of corals, bryozoa, brachiopods, and trilobites. Above the bone bed is the Columbus-Delaware limestone contact and a few thin beds of brown shaly material of that formation.

Permission must be obtained to enter the premises.

Joseph Harper Trabue Road Quarry
MCQ Industries, Columbus
(614) 486-5251

METROPOLITAN PARKS OF COLUMBUS AND FRANKLIN COUNTY

Authorized by law to conserve natural resources, the Metropolitan Park Board of Columbus and Franklin County has purchased more than 5,000 acres of land for the enjoyment, education, and appreciation of the people in Franklin County. The parks are essentially forest preserves with outstanding scenic features in woodlands, streams, rock cliffs, and lakes. Recreational facilities are developed where there is no conflict in preserving the natural features and wildlife. A wide range of activities, from passive recreation to more vigorous pursuits, is possible; the most popular is hiking on forest trails. Though some sites have agency day camp areas, these are not overnight camping sites. The concern of the park board is that present use and enjoyment shall not jeopardize these natural areas for future generations.

The physical environments vary. All are on glaciated land dissected by streams to form interesting topography. The parks on the west show the influence of the high-lime content soils underlain by limestone and dolomite rock formations. Those on the east are on the western edge of the Allegheny Plateau and are underlain with sandstones and shales. All are somewhat different and their features are described separately.

Metropolitan Park Board of Columbus and Franklin County
999 Park Road (P.O. Box 72), Westerville 43081
(614) 891-0070 - Central Office
(614) 882-1796 - Naturalists' Office

BLACKLICK WOODS METROPOLITAN PARK

633 acres

Southeast of Columbus on Livingston Ave., between Brice Rd. and SR 256

Much of Blacklick Woods is a beech-maple and swamp forest, largely unspoiled. Blacklick Creek flows through a part of the park, having eroded through the shales and sandstones and glacial soils. Many native wildflowers and shrubs may be studied as well as a great variety of birds and other animals. A live animal display with deer, raccoon, fox, and many other species is maintained.

The Park Board has dedicated a 54-acre portion of this park as a scenic nature preserve under Ohio's Natural Areas

METROPOLITAN PARKS OF COLUMBUS AND FRANKLIN COUNTY (Cont.)

system. See Nature Preserve section for detailed description of this part of Blacklick Woods.

An interpretive center as well as naturalist services are available by advance arrangement. Recognized groups may reserve shelter for educational purposes by paying a service charge. A six-tenths mile loop trail is paved for use by physically handicapped persons. Visitors may request a self-guiding trail brochure describing highlights of the nature trail.

BLENDON WOODS METROPOLITAN PARK
577 acres

10 miles east of Worthington, just beyond Big Walnut Creek on south side of SR 161

Blendon Woods is a large area, most of which is wooded in beech-maple and oak-hickory forest association. It is largely unspoiled though used extensively the year round. Several ravines and small streams reveal shales and sandstones which underlie glacial soils. Native wildflowers in season are abundant as well as birds and small water and land animals.

Walden Wildlife Refuge gives visitors an opportunity to view free-flying ducks, geese, heron, shorebirds, and other wetland wildlife at close range in natural surroundings. Elevated observation shelters on the perimeter of a lake are provided for viewing without being seen. A small visitors center with displays and programs to assist school classes, scouting groups, garden clubs, and church organizations is available.

A self-guided trail brochure is available for study of the nature trail.

DARBY CREEK METROPOLITAN PARK
359 acres

On east side of Big Darby Creek on Koebel-Suydam Rd., off US 40, about 6 miles west of Columbus city limits, 2 miles east of West Jefferson

Darby Creek provides a wide variety of habitats for many forms of wildlife as well as a winterized lodge for

educational purposes. Much of the area is wooded, primarily in an oak-hickory association. In addition, it is highly valued for the native wildflowers and shrubs, a wide variety of birds, and trails leading to the water's edge. The soil is a neutral prairie type of glacial origin, underlain by dolomite which accounts for star grass and other prairie flower species in the upland areas.

A self-guided trail brochure is available for Darby Creek nature trails.

SHARON WOODS METROPOLITAN PARK
760 acres

Just off Cleveland Ave. and Schrock Rd. adjacent to I-71 north and I-270 east

The area consists largely of former farmland in various stages of succession and second growth woodland. Deciduous trees include pin oaks, red oaks, ash, maple, and sycamore; pine and spruce plantings and native species of trees and shrubs number several hundred.

There are several public shelters. Eleven-acre Schrock Lake is set aside for fishing by children. Several miles of nature trails have been developed and a self-guided trail brochure is available.

The Spring Hollow Outdoor Education Center is also located at Sharon Woods. Details about Park District-sponsored environmental education workshops can be obtained by writing the central office.

PRAIRIE LINCOLN LAND LABORATORY

7 acres

Back of school at New Rome north of US 40 on Amesbury Way

This small plot is an oak-hickory woodland with paths developed for finding typical trees and wildflowers and shrubs. No stream is available for aquatic studies. Benches are provided for class discussion. Visits are limited to school hours.

Principal
Prairie Lincoln School
4900 Amesbury Way, Columbus 43228
(614) 878-4403

ST. TIMOTHY SCHOOL OUTDOOR EDUCATION AREA

10 acres

Adjacent to church and school at 1070 Thomas Ln. east of Kenny Rd.

This small area, hemmed in by housing on three sides, demonstrates the many uses of a surburban "green island." Turkey Run Ravine runs east and west through six acres of the church property showing exposures of Ohio shale and glacial boulders, together with normal stream erosion and depositional features. Part of the area is wooded with native Ohio trees, shrubs, and wildflowers in spring. Several acres are natural field succession supplemented with the planting of a conservation packet of trees by students. Squirrels, as well as pheasant, quail, and other bird life are attracted to the area by winter feeding.

Principal
St. Timothy School
1070 Thomas Lane, Columbus 43220
(614) 451-2671
451-0739

SHAWNEE BRANCH MARBLE CLIFF QUARRIES

200 acres

Off SR 745, 1½ miles north of Shawnee Hills on west side of Scioto River

A relatively small operation, this quarry is worked for limestones, as are those belonging to the same company farther south on the river. The Columbus limestone is exposed, gray in color, with iron stains, and is highly fossiliferous. In addition to fossil collecting this is a good site for hunting evidence of glaciation in overburden, striae, and glacial till found in dissolved joints of the limestone.

Chester Brown, Superintendent
MCQ Industries
8415 Dublin Road, Powell 43065
(614) 881-5583
—In Columbus area dial 240 first.

SOUTH BRANCH HOOVER "Y" PARK

68 acres

In Hamilton Twp. between Lockbourne Rd. on the west, Bixby Rd. on east. Entrance on Rohr Rd., the south boundary

Only three miles from Columbus, this delightful property is operated by the South Side Branch YMCA as a nonprofit community service. It is divided into a camp and conference area for organized youth groups, and a picnic area. The three shelter houses in the picnic area are an income resource for which substantial fees are charged. The camp and conference area is encircled with lodges and sleeping cabins. A large athletic field is adjacent to the well-kept campus. A youth group of the Y operates Borror Observatory which contains a sizable telescope for studies in astronomy.

The campus, with large plantings of red and Scotch pine, gingko and other exotic trees, lies on a terrace above the flood plain of Big Walnut Creek. Rock is exposed in the ravine of a tributary stream, while deltaic deposits and cutbanks are a part of the typical glacial drainage river profile. Natural wooded areas border the streams, providing habitat for small wild animals, including many birds.

Manager
South Branch Hoover "Y" Park
190 Southwood Avenue, Columbus 43207
(614) 444-2151

WORTHINGTON HIGH SCHOOL LAND LABORATORY

15 acres

West of Worthington High School to the Olentangy River

One of the earliest outdoor education programs was begun on this plot many years ago. The physical environment, which includes the east bank of the Olentangy River, its cutbank and flood plain, terrace and upper till plain, plus a tributary flowing westerly into the river, provide many conditions for study.

The ravine of the small stream is well wooded and contains wildflowers in season. A pine plantation of red and white pine was established 20 years ago and the trees are now about 25 feet high. Large shrubs, attractive to wildlife, are found in one area. A wildlife plant seed area and an arboretum of Ohio trees have been planted through the years by students.

The enclosed and heated shelter serves as an office for the staff of the Worthington Outdoor Education Department.

Worthington Outdoor Education Dept. Office
600 North Dublin-Granville Road, Worthington 43085
(614) 888-0357

WORTHINGWAY LAND LABORATORY

8 acres

Behind the school at 6625 Guyer St., in Worthington

This small plot is being developed in conjunction with the other Worthington school natural areas. A swale draining a small watershed has cut a small ravine with Ohio shale exposed. The swale contains calamus and cattails; the ravine a few large black walnut, sycamore, and hackberry. There is evidence of rabbit, squirrel, chipmunk, raccoon, opossum, and possibly muskrat and mink. Seedings have been planted to attract wildlife.

Principal
Worthingway School
6625 Guyer Street, Worthington 43085
(614) 888-1330

FULTON COUNTY

CAMP PALMER

142 acres

Off SR 66 west on Co. Rd. MN

4-H Clubs of 10 northwest Ohio counties have developed this attractive camp in the wooded portion of a farm. The land is gently rolling except for steep slopes in the wooded areas where the streams are eroding through the glacial till. This varies in thickness but is as much as 100 feet thick in one place. There are some depressional areas but no year-round ponding.

A portion of the land is being reforested. A kitchen and dining hall, a recreation building, and heated cabin units for boys and girls constitute the living arrangements.

Richard McBride, Manager
Camp Palmer
Route 1, Fayette 43521
(419) 237-2155

FULTON POND STATE WILDLIFE AREA

38 acres

1½ miles north of US Alt. 20, 2 miles west of Swanton

This wildlife area contains a shallow pond of 15 acres with a large fish population. Associated aquatic organisms such as frogs (green and bull), turtles (snapper, painted, and musk), and snakes are present. Aquatic vegetation includes cattails, sagittaria, potamogetons, coontail, water milfoil, and others. Most of the land surrounding the pond is grassland with some oak and hickory woodland. Waterfowl use the area during spring and fall migration, but nesting is limited.

Division of Wildlife District 2 Office
952 Lima Avenue, Findlay 45840
(419) 422-6757

HARRISON LAKE STATE PARK

245 acres

South of US 20 on Co. Rd. 26

Harrison Lake, covering approximately 105 acres, was formed by constructing a dam on Mill Creek. Vegetation is sparse, primarily open beech woods and old fields planted in young pines. At the shallow end of the lake typical marsh vegetation and animals may be observed. Visitation is recommended for April through October. A naturalist is on duty from mid-June to Labor Day.

Park Manager
Harrison Lake State Park
Route 1, Fayette 43521
(419) 237-2593

MAUMEE STATE FOREST

3,068 acres

3 miles west of Whitehouse on Co. Rd. B

This flat plain property lies in an old glacial lake bed known as "Oak Openings." The soil is sandy, the result of beach deposits on the shores of this ancient lake, and supports an elm-ash-maple forest type. The land was purchased in 1947 and since that time has had all open areas planted to pine plantations.

Tributaries of Swan Creek, which joins the Maumee River in Toledo, wander through the area, providing a study of stream action in a flat region and the flora and fauna associated with streams and swampland. A good understory of wildflowers may be found in the old forests. Pheasant, squirrel, and rabbit are present. A fire tower is available for demonstrating triangulation and fire fighting techniques. Fifteen miles of trails have been developed to give access to all parts of the land.

Forest Ranger
Maumee State Forest
Route 1, Swanton 43558
(419) 822-3052

GALLIA COUNTY

BOB EVANS FARMS
1,100 acres

One-fourth mile east of Rio Grande on SR 35

This extensive acreage is enclosed by Rio Grande College, Raccoon Creek, and the state highway. The topography of the land ranges from nearly level to rough as a result of the millions of years of erosion which have maturely dissected the Permian age sandstones and shales. Though much land is in crops and pasture, woodlands of large white oak, red oak, hickory, and tulip may be explored. A small farm pond is bordered by a park.

The Evans homestead was built in 1806 by settlers from Virginia. The farm and barns may be visited from June through October, the season limited because of mud conditions.

Manager
Bob Evans Farms Sausage Shop
Route 2, Bidwell 45614
(614) 245-5324

CAMP FRANCIS ASBURY
300 acres

2 miles west of Rio Grande

This fairly extensive camp property has a wide variety of habitats for study. A three-acre pond, streams in mature valleys with high hills topped by Permian age rock, some exposures of typical shale and sandstone, fields in natural succession, and a large woodland area may be investigated. The ridgetops of the unglaciated Allegheny Plateau typically are mixed oak forest with hickory, sour-gum, dogwood, sassafras, and pines in the association; wildflowers and small animals are abundant.

Two winterized lodges with kitchens and a capacity of 44 persons each provide excellent accommodations.

Damon Stapleton, Manager
Camp Francis Asbury
Rio Grande 45674
(614) 245-5254

GALLIPOLIS AND THE ROLLER DAM
92 acres

Gallipolis River Front and the Roller Dam 9 miles below the city

Unlike many Ohio towns Gallipolis has retained its history and charm through its long years of development. Homes built after the log cabin era remain today. A brick tavern built in 1819 is now a museum of the Ohio Historical Society. Of even greater significance is the riverfront, which has kept its natural beauty.

Government dams above and below Gallipolis have deepened the channel of the Ohio River and brought extensive trade to and beyond the town. The present dam below is well worth studying because it has eight roller gates between 16-foot piers. It is non-navigable, high lift, and gated; top length of the gated section is 1,132 feet, damming height is 29 feet above sills. There are four public access sites with parking areas and picnic units; 46 acres are earmarked for recreation sites.

The Ohio River in the Gallipolis area cuts through Pennsylvanian age rocks forming maturely dissected relief approximating 400 to 500 feet. The hills above the flood plain are forested with mixed hardwoods of oak and associated vegetation.

A study of the ecology and history of the area could be a stimulating experience for high school students.

Contact for tour of locks and dam:

U.S. Government, Gallipolis Lock
Gallipolis 45631
(614) 256-6311

TYCOON LAKE STATE WILDLIFE AREA
684 acres

On SR 554 northeast of Rio Grande

A small dam on a tributary of Raccoon Creek provides the natural environment for an abundance of wildlife. The area is situated in the maturely dissected Allegheny Plateau cutting through the Permian age shales and sandstones to the older rock formations of Pennsylvanian age. The topography is rolling hills and wide valleys.

The impoundment brings various species of waterfowl during migration. A small marsh development has created habitat for rails, raccoon, muskrat, shorebirds, woodchuck, snipe, and various species of amphibians. Bobwhite quail are abundant in and around the area. Beaver activity may be observed and deer frequently seen. Bass and bluegill make good fish studies.

Area Manager
Tycoon Lake State Wildlife Area
Route 2, Bidwell 45614
(614) 245-5289

GEAUGA COUNTY

AQUILLA LAKE STATE WILDLIFE AREA

69 acres

Off US 322, 2 miles northwest of Claridon

A glacial kettle hole, a small lake formed by the melting of a large chunk of ice left by the wasting glacier, provides a 40-acre water habitat and swamp land. A variety of waterfowl may be seen in spring and fall months. Wood duck and mallard nest on the property. One or two pair of Canada geese have been known to nest in the marshy areas.

Land access to the lake is a long sloping hillside consisting of about 20 acres. Sandstone bedrock outcrops on the north side. A previous owner sculptured an Indian head in the rock with the name "Chief Aquilla" inscribed below the figure. Boat rental and a concession are open during summer months.

Division of Wildlife District 3 Office
912 Portage Lakes Drive, Akron 44319
(216) 644-2293

AUBURN MARSH STATE WILDLIFE AREA

461 acres

North of US 422 at Auburn Center

This property lies in a shallow U-shaped valley with scattered knolls. These are characteristic of the glacial end moraine of the area. The soils are acid, poorly drained, and waterlogged until late spring. A small, well-developed beech-maple woods is on the property. No facilities are available except parking.

Division of Wildlife District 3 Office
912 Portage Lakes Drive, Akron 44319
(216) 644-2293

BIG CREEK PARK

635 acres

Three-fourths mile north of Chardon on old SR 44, entrance on Robinson Rd.

Big Creek, a short tributary of Grand River, meanders through this scenic park. The creek has eroded through the Pennsylvanian-Mississippian age sandstones and shales to form steep cliffs and spectacular rock outcrops.

On the cliffs grow 12 different kinds of fern, club moss, liverwort, and many other species of plants. The deep moist valley contains the hemlock trees of glacial relict vegetation.

The surrounding upland area is rolling and wooded with deciduous trees and dense undergrowth in places. Several small lakes provide aquatic habitat. Nature trails have been established and permit observation of a great variety and abundance of wildflowers. Deer, fox, beaver, many birds, including waterfowl, in addition to small mammals, constitute the animal population.

Primitive camping for special groups is available. One-fourth mile of paved trail for the handicapped has been added at Big Creek.

Director-Secretary
Geauga County Park District
9420 Robinson Road, Chardon 44024
(216) 285-2222, Ext. 61

BUCKEYE TRAIL

31 miles

Through the east side of the county from Big Creek Park (Geauga Metropolitan Park) to LaDue Reservoir

The trail proceeds along country roads through moderately rolling countryside, except where streams have dissected the terrain. This is the low-lime till soil region where the process of glaciation has resulted in poorly drained soils. Observation of plant relationships to this feature should prove very interesting. At places the change of the Pennsylvanian age rock formation to Mississippian strata may be seen. At Big Creek Park (see description above) the Sharon conglomerate forms steep cliffs and spectacular outcrops. Nature trails and facilities are available here.

For maps and further information contact:

Buckeye Trail Association, Inc.
P.O. Box 254, Worthington 43085

BURTON MEMORIAL FOREST

32 acres

On Hiram Rapids Rd., one-half mile south of SR 87

Almost 50 years ago, the Burton Township trustees purchased this beech forest remnant to preserve as a memorial. Since then the Chamber of Commerce has assisted in maintenance and further plantings of sugar maple, red and white pine, and Norway spruce.

No picnic sites or other park developments have changed the quiet, undisturbed serenity of a walk along the simple trails. Wildflowers are abundant in the spring, and birds, squirrels, rabbits, and raccoons are the only permanent residents.

The Cuyahoga River, glacial deposits, and changes in topography due to the Mississippian and Pennsylvanian age rocks below the surface are physical features in close proximity to the woods, adding to the possibilities for ecological study.

Manager
Burton Memorial Forest
Box 373, Burton 44021
(216) 834-4417

CAMP HO MITA KODA

85 acres

On Auburn Center Rd. south of Newbury

In this heavily forested area a camp for diabetic children has been developed. It is situated on the hummocky topography of glacial end moraine. Two small streams wander through the property. Wildflowers, birds, and small mammals are found in the woodlands, through which hiking trails have been developed.

A large lodge and sleeping cabins, not winterized, are available. Field trips or school camping programs may be arranged.

George Cervenka, Manager
Camp Ho Mita Koda
14040 Auburn Center Road, Newbury 44065
(216) 564-5125

GEAUGA LAKE

276 acres

On SR 43, 4 miles south of Solon

This small lake lies in a glacial lake bed formed when a stream was blocked on the south by an end moraine and on the north by the wasting ice mass. "Geauga" is an Indian word meaning raccoon. These are reported to be abundant in the area.

The lake has an amusement park adjacent to it; but the lake itself, marsh areas with turtles, muskrats, and waterfowl, and a variety of mixed hardwood trees offer study possibilities.

Manager
The Geauga Lake Park
Box 154, Aurora 44202
(216) 562-7131

HALLE PARK

300 acres

Near Burton, on SR 700

Woodland, marsh, and stream provide a variety of habitats for plants and animals on this property. The east branch of the Cuyahoga River, which is fairly low in pollution at this point, runs through the property. The area lies on glacial lake deposits of silt and clay.

The dining and recreation hall as well as sleeping cabins are not winterized but may be used from May through October. Hiking trails lead into the woodland, where wildlife finds habitat.

Manager of Halle Park
Jewish Community Center of Cleveland
3505 Mayfield Road, Cleveland 44118
(216) 382-4000

HAMBDEN ORCHARD STATE WILDLIFE AREA

841 acres

On SR 608, 3 miles south of Hambden

The name of this property refers to the 224 acres of abandoned orchard. Sandstone bedrock is reported to be close to the surface, resulting in shallow, acid soils. The area is just south of the Defiance end moraine on thin glacial till plain and esker deposits. The dominant tree species are beech and maple with hickory, black walnut, and red oak.

Deer, grouse, woodcock, squirrel, and rabbit are common. Woodcock use the area for nesting. Two small ponds provide fishing and encourage black, mallard, and wood duck to stop during migration. Warblers, too, frequent the area during this time. There is a great variety and abundance of wildflowers.

Wildlife management as well as soil and water conservation practices may be observed here. There is a roadside rest area conveniently ready on US 6 east of Hambden.

Division of Wildlife District 3 Office
912 Portage Lakes Drive, Akron 44319
(216) 644-2293

HIGHBROOK LODGE

50 acres

On Aquilla Rd., Chardon

This camp, established for blind children and adults, may be used during spring and fall months for field trips. Most of the property is woodland with beech-maple climax forest. Although killed years ago by the chestnut blight, some very old chestnuts, five to six feet in diameter, are still standing. Good exposures of bedrock Sharon conglomerate as well as glacial boulders brought down from Canada may be seen along the streams. Hiking trails with guide wires have been established throughout the area.

Manager
Highbrook Lodge
Cleveland Society for the Blind
1909 East 101st Street, Cleveland 44106
(216) 791-8118

METALS PARK

500 acres

Off SR 85 east from I-271 at Russell

An impressive educational and aesthetic experience of great diversity is destined for the teacher and students who visit Metals Park. A huge geodesic dome constructed from aluminum tubing lies on a grassy slope away from public notice. The dome was the first created by R. Buckminster Fuller; it is a network of hexagonal and pentagonal shapes designed to represent the crystallized structure of metals.

Beneath the dome there is a unique garden of metals and a jet fountain. The saucer-shaped garden contains 65 very

large and some not-so-large specimens of ores representing the world's most important sources of metal, distributed among quartz pebbles instead of soil. The display specimens of hematite, magnetite, jasper, and taconite from Michigan and Minnesota; aluminum ore from Arkansas; nickel, copper, manganese, zinc, lead, and silver from all over the world; and Ohio's own limestone illustrate the sources of materials which have made modern technological advances possible.

In sharp contrast to the modernity of the geodesic dome and the importance of man's use of metals is an outstanding beech-maple forest lying below the dome area, purchased for expansion when needed. A study of this near-virgin woodland places modern technology and Ohio's natural heritage into a perspective that highlights the value and the need for both.

Manager, Public Relations
American Society for Metals
Metals Park 44073
(216) 338-5151

PUNDERSON STATE PARK

733 acres

On SR 87 west of Burton

This scenic property with an uncompleted Tudor manor house was purchased in 1950 by the state and developed into an outstanding park. Punderson Lake, a natural glacial lake of 90 acres, is surrounded with the rolling topography characteristic of glacial end moraine. Its boggy margin is still quite wild. The forested part is predominately beech-maple with a variety of trees, shrubs, and wildflowers in association. It is recognized as an excellent wildlife area.

In addition to the lodge, cabins are available. A nature program is conducted in the summer months.

Park Manager
Punderson State Park
Box 178, Newbury 44065
(216) 564-2279

RED RAIDER CAMPS

300 acres

On SR 87, one-half mile east of SR 306

This delightfully natural area is already used 22 to 24 weeks per year for outdoor education. It is advantageously situated on the Chagrin River, which has cut a deep valley through the Sharon conglomerate, a basal formation of Pennsylvanian age. The forest is beech-maple and associates, with enough maple to keep a sugar bush in operation. General areas of study include fresh water ecology, field and meadow ecology, geology, conservation, and pioneer history.

A main lodge has two bunkrooms; two wings of the dining area provide additional sleeping quarters. A second winterized building is used for activities. Hiking trails have been established and may be used for field trips as well as for school camping.

Manager
Red Raider Camps, Inc.
20800 Almar Drive, Cleveland 44122
(216) 561-0652

RICHARD'S CAMP

50 acres

One-fourth mile east of Thompson on SR 528

This camp, adjacent to the township park, was designed for recreation. However, its 46 acres of woodland, which include high cliffs carved in the Sharon conglomerate and many varieties of native wildflowers, make it desirable for nature hikes. A small lake provides an environment for aquatic plants and animals, including equisetum and amphibians. The beech-maple forest contains red, white, black, scarlet, and pin oak. Found, too, are such trees as walnut, tulip, cucumber (*Magnolia acuminata*), hemlock, and white pine. Campsites are in the wooded area near the scenic rock ledges.

Manager
Richard's Camp
(winter or summer)
16780 Thompson Road, Thompson 44086
(216) 298-3870

RIVER PARK

50 acres

On Hiram Rapids Rd., 3 miles south of Burton

Park land along the upper part of the Cuyahoga River has been acquired recently. It contains an extensive swamp habitat which can be reached by boat from the park. Buttonbush and cattail stands contribute to its value as a nesting place for duck, bittern, and prothonotary warblers. Many migrating waterfowl and shorebirds may be observed.

Director-Secretary
Geauga County Park District
9420 Robinson Road, Chardon 44024
(216) 285-2222, Ext. 61

SUNRISE FARM

173 acres

On SR 87, Burton, 30 miles east of Cleveland

Situated in the heart of the Western Reserve Territory at Burton, this farm offers a rich experience in studying the

history of the area, which celebrated its 175th birthday in 1973. Here classes may observe first hand the actual activities of farming, with all the crops, equipment, and animals involved, as well as the natural environment – the rolling hills and flood plains, the Cuyahoga River, swamps, glacial soils and gravel deposits, and woodland which provided the physical basis for frontier development.

The educational-recreational program includes a barn demonstration, a visit with animals in their natural habitats, a demonstration of early American power devices using animals, water, and windmills, a hayride, and a visit to an aviary.

The fee is modest and bookings must be made well in advance.

Manager
Sunrise Farm
Box 323, Burton 44021
(216) 834-8902

THOMPSON LEDGE PARK
31 acres

One-fourth mile east of SR 528 at Thompson Center

This area lies on the glaciated, rather hilly Allegheny Plateau on a high ridge. Outcrops of Sharon conglomerate are the outstanding feature. Remnants of a beech-maple and mixed oak forest with many other species in the association may be studied. Hiking trails lead through the scenic area. A silica sand processing plant is nearby.

Thompson Township Park Commissioners
6503 Madison Road, Thompson 44086
(216) 298-3991

GREENE COUNTY

BEAVERCREEK SCHOOLS LAND LABORATORY
46 acres

2940 Dayton-Xenia Rd.

An area adjacent to the school is in the process of development for outdoor education purposes. Part is already woodland with mixed hardwood trees, some of which are typical of limestone soils. An understory of shrubs and wildflowers is particularly interesting in the spring before the trees come into leaf. A school forest has been a project of students and teachers.

Director
Beavercreek Schools Land Laboratory
2940 Dayton-Xenia Road, Xenia 45385
(513) 426-1522

BERGAMO CONFERENCE CENTER
265 acres

On County Line Rd. and Patterson Rd., 5 miles east of Dayton

Named after the Italian county where Pope John XXIII was born, this conference center offers its meeting rooms and facilities to all religious, educational, and industrial groups. Handhewn stone walls suggesting the simplicity of a western fort help express the purpose of the center, namely, to further individual and group renewal. Two beautiful buildings contain large conference rooms, small group discussion areas, a chapel, lounge, dining facilities, and 6 hours.

In addition to the buildings, the property consists of farm and woodland. Situated on a glaciated area between the Mad River and the Little Miami watershed, part of the topography is rugged where small streams have eroded through to the Ordovician limestones and shales. A larger portion is level.

Bergamo
4100 Patterson Road, Dayton 45430
(513) 426-2363

BUCKEYE TRAIL
41 miles

The trail enters near Spring Valley Lake and passes northward to Yellow Springs, then west through Fairborn to Dayton

The trail gives a good cross-section of the terrain and forest types found in Greene County. The south half is in the oak-sugar maple type and the north half (north of Xenia) is in the mixed oak type. The trail is rough where the land is cut by stream valleys 100 feet or more in depth, with a maximum relief in the county of from 730 to 1000 feet above sea level.

The trail passes the Spring Valley State Wildlife Area, Glen Helen Nature Preserve, and is close to John Bryan State Park (see descriptions following). A good vista point on the trail is at the Wright Brothers Memorial near the Montgomery County line.

For maps and further information contact:

Buckeye Trail Association, Inc.
P.O. Box 254, Worthington 43085

CENTRAL STATE UNIVERSITY OUTDOOR EDUCATION AREA

68 acres

On US 42, south of Campus

A developing program is well under way for students of the university to study land use in farming, conservation practices, recreation, and human ecology or man's relationship to environment. The former farm lies on the Cuba end moraine of the Wisconsinan glacier, which gives it a gently rolling topography. A small stream runs through the property impounded to form a body of water for the study of aquatic plants and animals.

A woodlot contains the oaks, hickories, walnut, and maple trees typical of the area and provides shelter for wildflowers, birds, and small mammals. Indian artifacts are found. Hiking trails, a farmhouse, and barns are available.

Manager
Outdoor Education Area
Box 338, Central State University, Wilberforce 45384
(513) 376 6321

DAYTON-MONTGOMERY COUNTY PARKS

HUFFMAN RESERVE

197 acres

On SR 4 and 69, northeast of Dayton

One of the eight reserves maintained for public use, Huffman is one of two having a lake. Other physical features are the Mad River, its flood plain and upland forests. Exposures of Richmond limestone and shale of Ordovician age provide a mecca for fossil hunters. Aquatic plants and animals may be observed along the river. The lake attracts migrant waterfowl in March and November. This is a well manicured park with limited hiking trails. Contact the Dayton-Montgomery County Park District, address below.

SUGARCREEK RESERVE

565 acres

On Wilmington Pike, 1 mile south of SR 725

Glacial outwash, kame deposits, and flood plains along Sugar Creek, a tributary of the Little Miami, give a variety of study possibilities at this site. Sugar Creek is polluted but of interest for aquatic study. Two smaller unpolluted streams on the property provide a contrast.

Meadows, shrublands, and second-growth woodlands on the upland show natural succession on former farmland. These afford a seasonal display of wildflowers and a wide variety of birds and animal life. A few very old white oaks remain, reported to be 350 years old.

Groups may join the general public for interpretive "Green Mansion Walks" or hike the marked trails.

Dayton-Montgomery County Park District
1375 East Siebenthaler Avenue, Dayton 45414
(513) 278-5233

GLEN HELEN NATURE PRESERVE AND OUTDOOR EDUCATION AREA

960 acres

Extension of Antioch College at Yellow Springs

Glen Helen is a living demonstration of geologic and ecologic processes providing an outdoor laboratory and classroom at the doorstep of Antioch College.

Yellow Spring Creek, a tributary of the Little Miami River, has incised itself deeply in the dolomitic rock of the Silurian age, forming a steep-sided valley rimmed by rock ledges. From these seep numerous springs around which ferns and other moisture-loving plants grow in profusion.

At the upper end of the ravine, a spring has deposited a yellow travertine limestone mound projecting into the valley. The scenic topography in the valley includes the cascades, the result of the more resistant layers of the dolomite forming a shelf, and rocks yielding a significant series of fossils.

The soil mantle supports a stand of old-growth hardwoods, primarily chinquapin oak (a neutral soil tree), white oak, bur oak, sugar maple, basswood, and black walnut. The understory is largely redbud and spicebush with wildflowers of outstanding interest. The natural area, a National Natural Landmark, occupies about 250 acres of the entire tract.

One hundred acres of woodland and a conifer plantation are managed by the Yellow Springs High School as a school forest. Hiking trails, a trailside museum, and a regional environmental center are facilities available to the visitor.

An outdoor education center, functioning as an integral part of the Glen, provides a resident ecology program for sixth grades in the region and conducts a variety of in-service workshops and courses for teachers and graduate students.

For hiking on the trails or any type of program offered contact:

Director
Glen Helen
Antioch College
Yellow Springs 45387
(513) 767-7331, Ext. 421

GREENE COUNTY FISH AND GAME FARM

130 acres

4 miles south of Xenia on Union Rd.

Two programs beyond their fishing and hunting interest receive priority with the members of the association owning this property. They are dedicated to conservation, particularly the preservation and propagation of nut trees, and to youth, with whom they wish to share their interests.

The farm contains three ponds, pine plantations, wildlife areas in grass and natural succession, a woodland containing many kinds of nut trees as well as oaks, maples, and ash. Some of these are reported to be over two hundred years

old. Native walnuts and hickories and other varieties are being propagated to insure trees for posterity.

The association cooperates with the Greene County Soil Conservation District and the schools. A leaflet with tree identification and inventory for the nature trail is provided. A new, well-equipped club house is available. All educational groups with adequate leadership are welcomed.

Greene County Fish and Game Association
Box 64, 107 Market Street, Xenia 45385
(513) 372-6087

GREENE COUNTY PARKS

The Greene County Park District was organized in 1963 for the purpose of acquiring and developing open space for parks and recreation areas. Four such sites provide opportunities for a variety of ecological studies, including man's impact on his environment. For further information contact:

Director
Greene County Park District
Citizens First National Bank
Xenia 45385
(513) 372-4461

PARK I

50 acres

One-half mile west of Xenia on the Dayton-Xenia Rd.

A mixed oak woodland and open fields afford beginning opportunities for observing trees, shrubs, wildflowers in season and "park ecology" close to an urban setting. Facilities are adequate.

PARK II

5 acres

On SR 725 at Spring Valley

This small park is situated along the Little Miami River, giving access to water studies, boating, and fishing.

PARK III

50 acres

1 mile southwest of Cedarville on US 42

A one-mile stretch on either side of Massies Creek provides for water life, flood plain vegetation, and geologic studies. Hiking trails through the woodland and access to an Indian mound give additional opportunities for environmental awareness.

PARK IV

10 acres

2 mile northeast of Bellbrook on Kupkington Mill Rd.

Frontage on the Little Miami River, where water studies or fishing may be pursued from the banks or by boat and canoe, is an asset at this site. Trees, shrubs and wildflowers may be observed.

JOHN BRYAN STATE PARK

881 acres

On SR 370 and 343 east of Yellow Springs

The Little Miami River down-cutting through massive rock of uniform resistance is responsible for the scenic features of this park. The larger portion is in a valley whose profile has been widened by erosional forces. It is well forested with older hardwoods which include the oaks, sugar maple, basswood, and black walnut. Within the cool moist ravine, glacial relict vegetation persists and, conversely, prairie plants are found in typical habitats.

Huge slump blocks of the Silurian age dolomites which are exposed on the valley walls have fallen below, some to stream level. One of these, called Steamboat Rock, has vertical instead of horizontal bedding planes and provides a study in plant succession.

The Glen Helen Nature Preserve is on the west side of the park, Clifton Gorge on the east. A park naturalist will assist teachers on nature walks and describe the historical aspects of the area. These include Clifton Mill, a grist mill in operation for the past 100 years, the Horace Mann monument, the Glen Homestead, and the Grinnell Mill. For a more detailed description of Clifton Gorge see Nature Preserve section of this book.

Park Manager
John Bryan State Park
Route 1, Box 74, Yellow Springs 45387
(513) 767-1274

SPRING VALLEY STATE WILDLIFE AREA

841 acres

East of US 42, 2 miles south of Spring Valley

This unique area along the Little Miami River provides a large amount of naturally wet marshland. A semi-natural 80-acre lake attracts a variety of waterfowl, especially during migration. Wood duck nest on the site. Marshy areas, one of which is known as Sinclair Swamp, attract a number of unusual birds and provide a variety of aquatic vegetation. Sinclair Swamp has long been a favorite for bird students.

Skunk cabbage appears early in the spring in another little swamp west of the railroad. There are, in addition, wooded areas on the uplands primarily of the oak-hickory forest type. Hiking trails and facilities make this an excellent study or field trip area.

Area Manager
Spring Valley State Wildlife Area
Route 1, Waynesville 45068
(513) 488-2530

GUERNSEY COUNTY

BUCKEYE TRAIL

36 miles

From Seneca Lake at roadside park to Piedmont Lake

This segment of the trail begins at the park near the dam and proceeds through back country on little-used scenic roads, including a part of the original Zane Trace to Old Washington. This old town of historical interest was captured by Confederate General Morgan in his raid through Ohio. A monument commemorates a battle which was fought here with the Union cavalry under Colonel Shackleford.

The trail continues north over little-used township and county roads, following along the east edge of Salt Fork State Park. Road cuts and ravines reveal a series of Pennsylvanian age sandstones, shales, and coal. The trail turns eastward beyond the Salt Fork area through a countryside of beautiful hilltop views. It crosses several small streams which are well stocked with fish due to a clean watershed. Island Creek Coal Company's Vail Mine is passed at the east edge of the county. This is a deep mine using modern equipment including a unit train for hauling the coal. The trail ends at the boat dock on Piedmont Lake, where good facilities are available. For maps and further information contact:

Buckeye Trail Association, Inc.
P.O. Box 254, Worthington 43085

ROLLING HILLS SCHOOL OUTDOOR EDUCATION AREA

154 acres

On SR 209, 1 mile south of Byesville

This school has a flourishing land laboratory planted in oats, corn, and meadow with different varieties of these crops in each plot. A nursery project is under way with plantings of walnut, locust, autumn olive, white pine, and tuliptree. The common hardwoods, together with gum, buckeye, pines, and ferns constitute the school forest.

Under development are a biological pond and an arboretum. Two nature trails lead students or visitors to the various habitats of plants and animals. The area may be visited in May or September as well as during the summer months.

Manager
Rolling Hills Outdoor Education Area
Meadowbrook High School
Route 1, Byesville 43723
(614) 685-2313

SALT FORK STATE PARK

20,143 acres

East of I-77 and north of I-70 on US 22

Recently established, this large area is a part of the Wills Creek watershed which joins the Muskingum River south of Cushocton. The rocks exposed in the hillsides are Pennsylvanian age sandstones, shales, coal, and limestone. This is typical unglaciated Allegheny Plateau dissected to form rounded high hills and fairly wide valleys. The lake covers 2,052 acres of this valley section with terminal ravine areas in marshland.

A considerable part of the land has been denuded for farming but is being returned to forest by natural succession and plantings. Wooded areas are dotted through the acreage, some oak-hickory forest type, or beech-maple with aspen. In the extensive camping sites are pine plantings in addition to the native woodland. Water areas harbor waterfowl in migration. The rather unusual horned larks are seen on the upland meadows.

A naturalist is on duty from mid-June to Labor Day. The park has a beautiful lodge, cabins, and a marina.

Park Manager
Salt Fork State Park
Box 672, Cambridge 43725
(614) 439-3521

SENECAVILLE NATIONAL FISH HATCHERY

118.5 acres

16 miles southeast of Cambridge below Seneca Lake Dam

The U.S. Department of Interior maintains these ponds and station to raise fish for stream and lake stock. During some seasons of the year various fish culture techniques can be demonstrated. Guided tours will be provided by appointment, at which time descriptive leaflets may be obtained from the display in front of the office building. A one-mile nature trail has been developed to increase accessibility to the interesting features. May through October are the months recommended for visitation.

Hatchery Manager
Senecaville National Fish Hatchery
Senecaville 43780
(614) 827-3341

SPRUCE VALLEY

20 acres

Off SR 83, on Westland Twp. Rd. 427, 2 miles south of New Concord

Tucked away among the rolling hills between New Concord and I-70 is a mature spruce plantation bordering a ravine with natural vegetation. The tall, long-unharvested spruces seem to stand as guardians over the valley, with its abundance of orchids, hepaticas, Canada lilies, wild lily of the valley, and 11 species of ferns. A small impoundment gives opportunity to study water life.

The growth of a multitude of seedlings might provide an interesting study for vocational agricultural students. Well-marked nature trails give access to the numerous and delightful clusters of flowers, shrubs, and other vegetation. The total property is a landscape architect's interpretation of "Design with Nature."

Mr. and Mrs. Howard Warwick
Route 2, New Concord 43762
(614) 826-4262

HAMILTON COUNTY

BUCKEYE TRAIL

13 miles

From the Little Miami River at Miamiville to Eden Park

The trail follows roads and city streets in Hamilton County. The first part goes through the Indian Hill Greenbelt (see description of Indian Hills Schools Outdoor Education Center and Eden Park, following), then along city streets to Eden Park. For maps and further information contact:

Buckeye Trail Association, Inc.
P.O. Box 254, Worthington 43085

CITY OF CINCINNATI PARK SYSTEM

Through the years over 3,000 acres of land have been acquired and developed by the Cincinnati Board of Park Commissioners. These are well distributed throughout the city and visited by many people yearly. Briefly described are seven parks which have special value for nature study. For reservations, trail guides, and general information, contact:

Director
Cincinnati Board of Park Commissioners
950 Eden Park Drive, Cincinnati 45202

(513) 352-4080

AULT PARK

223 acres

On east side at end of Observatory Ave.

Primarily these are formal gardens with modern and old-fashioned roses, peonies, dahlias, and annuals. However, a scenic overlook and a geology trail above the Little Miami, which has eroded deeply into the dense Ordovician limestones and calcareous shales, are significant. The area has wooded ridges and meadows, good habitats for studying both plants and animals.

BURNET WOODS

88 acres

In central part of Jefferson and Clifton avenues

An outstanding trailside nature museum serves as the nucleus of activity at this beautifully wooded park. Nature trails have been developed through the woodland. A lake, too, adds to its usefulness for ecological studies. A supervising naturalist is ready to assist teachers and students.

CALDWELL PARK

122 acres

On North Bend Rd. between Caldwell and Millcreek

Donated by J. Nelson Caldwell in 1926, this park is a very wild virgin woodland with parking areas and hiking trails but no other development. It is reported to have been owned by only two persons since it was Indian territory—John Cleves Symes and the Caldwell family. The topography is extremely rugged and only the more adventuresome are advised to explore its paths. The main entrance is on Caldwell Road.

EDEN PARK

184 acres

Along the Ohio River, east on Eden Park Dr. off Gilbert Ave.

This park features a conservatory, a natural history museum, and an art museum. It also houses the Historical Society. The conservatory makes six floral displays each

CITY OF CINCINNATI PARK SYSTEM (Con't.)

year plus permanent tropical, desert, and orchid displays. "Presidents Grove" contains a tree planted for each president, chosen by him or his heirs. The Ohio River Navigation Monument, a historical spring house, *Ohio River scenic* overlooks, floral gardens, two small lakes, and a reflecting pool are of interest. There are also wooded areas and the Pop Harden Boy Scout Trail.

HAUCK, CORNELIUS J., BOTANIC GARDEN
(Sooty Acres)
8 acres

At Reading and Taft roads

This exceptional estate, a gift to the Park Board, features an outstanding collection of trees, shrubs, and flowers. Visitors are welcome. The garden closes at dusk.

MEMORIAL PIONEER CEMETERY
2 acres

On Wilmer Ave. opposite Lunken Airport

Ohio history and an observation of the weathering of ancient tombstones make a field study at this site noteworthy.

The first boatload of pioneers to come down the Ohio River settled in this area in 1788 and named it Columbia. Many of these first settlers are buried in the cemetery, and some of the names of the tombstones will be familiar to those acquainted with Ohio's frontier tales. The cemetery is also the site of the first Protestant church in the Northwest Territory.

MT. AIRY FOREST
1,500 acres

Northwest on Colerain Ave.

A veritable haven, this large acreage provides a wide scope for ecological studies concerning man and his natural environment. The forest was the first municipal reforestation project in the US—700 acres in hardwoods and 200 in conifers with special plant collections in a 120-acre arboretum. This forest park includes memorial plantings of azalea and rhododendron. More than 300 acres are native woodland, and 14 miles of hiking trails have been developed throughout rugged hills and ravines.

An Arboretum Educational Center, three party lodges, group and day camping areas, and 23 major picnic areas add to the convenience of visitors. Charge is made for lodge reservations only.

STANBERY PARK
78 acres

In Mt. Washington at Oxford Ave.

Native hardwoods here are reported to be among the best in the country. Large beech, maple, tulip, cucumber magnolia, and oak are dominant. A picturesque creek flows through a deep valley. The caretaker is also a naturalist.

CINCINNATI RECREATION COMMISSION OUTDOOR EDUCATION PROGRAM
165 acres

The Cincinnati Recreation Commission, recognizing that outdoor education as well as recreation are imperative educational goals, has established three outdoor education centers within the city in close proximity to hundreds of school children. Each center maintains a staff and a specialized program adapted to the site, but all aspire to develop in children an understanding of the total environment, to preserve and protect natural areas, and to provide constructive outdoor activities for the citizens of Cincinnati. The supervisor and staff work with school classes and other groups in nature study, conservation projects, pioneer history, and leadership workshops. For further information regarding each of the three following sites contact:

Supervisor of Outdoor Education
222 East Central Parkway, Cincinnati 45202
(513) 352-4032

AVON WOODS
14½ acres

4235 Paddock Rd.

This small segment of forested land, bordered by a golf course which served to protect it, was acquired in 1970. The land is composed of rolling hills formed by a stream cutting a valley through Ordovician age limestone and shales, covered with a mixed hardwood forest containing a climax beech and maple, tuliptree, walnut, and hickory canopy. Understory plants include sweet buckeye and paw paw, with a rich variety of wildflowers.

CINCINNATI RECREATION COMMISSION OUTDOOR EDUCATON PROGRAM (Cont.)

A rustic winterized lodge with a capacity of 80 persons provides indoor educational facilities and a nature museum. The trails, garden spot, stream and indoor activities suggest endless opportunity for multi-disciplinary programs.

CALIFORNIA WOODS
(CINCINNATI WATERWORKS PARK)
75 acres

5400 Kellogg Ave.

This relatively large tract of woodland is located on an Illinoian glacial terrace at the confluence of the Little Miami and Ohio River valleys. A remnant bottomland hardwood forest borders Lick Run, the first tributary of the Little Miami River in the preserve area. Approximately 50 acres of mature mixed mesophytic forest are regarded as among the finest examples of this type remaining in southwestern Ohio. Fifty-three species of trees have been identified, four believed to be at least 400 years old. The rich herbaceous flora associated with this forest type has been exceptionally well preserved. The two ginsengs, goldenseal, bent trillium, Canada lily, and lily-leaved twayblade are a few of the uncommon species found in the woods.

Animal life, too, is unusually abundant. One hundred fifty-six species of birds have been identified as well as the broad-headed skink and 12 additional species of reptiles, 13 species of amphibians, and 24 mammals. Terrestrial and aquatic insects and other invertebrates are numerous.

Geologically the glacial features tell the story of the changes effected by stream reversal as the glaciers advanced. Fossiliferous thin-bedded limestones and limy shales of Upper Ordovician age are exposed in Lick Run.

This significant site, proposed as a National Natural Landmark, has in interpretive center, extensive hiking trails, and tremendous program possibilities.

LA BOITEAUX WOODS
54 acres

5400 Laniers Ln.

This rugged natural area was donated to the city in 1958 with the stipulation that it be used as a nature preserve and outdoor education area. Beautiful wooded hills and steep slopes resulting from stream erosion provide good exposures of the Ordovician age shales and limestones, rich in fossils. Secondary forest covers the area with a wide variety of woody and herbaceous plants. There are small pockets of climax beech forest and isolated large specimens scattered throughout the acreage.

Extensive hiking trails have been developed to reach sites of tremendous discovery value. The central building is large enough for groups of 100 and contains many teaching aids.

CINCINNATI ZOO
62½ acres

3400 Vine St., Cincinnati

Cincinnati, early termed the "Queen City of the West," is recognized for its many "firsts." Over 100 years ago the concept of a local zoo was developed, and today the zoo has 2,500 animals on display, including many rare and endangered species.

One attraction for children is the large number of baby animals; the zoo has tied the world record with six lowland gorilla babies, all on display. An aquarium with sharks, the nation's best exotic cat collection, a bird of prey flight cage, and a lake with two gibbon islands are further attractions to young and not-so-young.

The display houses, open grottos, and lake are arranged to please the long-enduring or the short-legged observer. Wheelchairs and a train are available for handicapped people.

The zoo is oper every day of the year at 9 a.m. Group rates may be negotiated.

Manager, Cincinnati Zoo
3400 Vine Street, Cincinnati 45220
(513) 281-4700

HAMILTON COUNTY PARK DISTRICT

Determined to preserve forever in their natural state large portions of acquired lands, the Hamilton County Park District Commissioners are developing the 5,773 acres with great care. Picnicking facilities, self-guiding nature trails of outstanding value, camping sites, golf courses, fishing lakes, and lodges have been developed at three sites. Shawnee Lookout park contains only parking space, a marina, and hiking trails. Some of the outstanding features and programs are described for each unique park.

Of special note is a credit course entitled "Field Studies in Natural History" conducted each year in the parks in cooperation with the University of Cincinnati. The course is designed to serve teachers, amateur naturalists, and camp leaders by acquainting them with the geology, flora, and fauna of the parks in a manner which can help them interpret these to classes. For reservations of facilities or a naturalist's services, for trail guides and further information about any park or the Field Studies course contact:

Director-Secretary
Hamilton County Park District
10245 Winton Road, Cincinnati 45231
(513) 521-9866

FARBACH WERNER NATURE PRESERVE
23 acres

On US 27 south of junction with I-275 at the corner of Colerain and Poole roads

This area, a recent gift to the Hamilton County Park District, has been designated a nature sanctuary, one of the last remaining open spaces in a fast developing commercial and residential region. It is conveniently located within close proximity to over 50 public, private, and parochial schools.

The property was originally a Revolutionary War grant to Arron Stout in 1816, during President Madison's term of office. It is composed of interlacing woodland, fields and meadows, lending itself well to a comprehensive outdoor education program including wildlife management, reforestation, demonstrations in conservation practices, organic gardening, land use planning projects, and ecological field studies. A rustic nature museum with facilities for special seminars and meetings is planned. For information and reservations of facilities as they become available, contact the park district director-secretary.

MIAMI WHITEWATER FOREST
1,955 acres

In the northeast part of the county, reached from Dry Fork Exit from I-74 to Harrison Pike, or Mt. Hope Rd. from US 128. Main entrance is from US 52 (Harrison Pike)

Heavily forested natural woodlands, lakes formed by impounding "Dry Fork," scenic overlooks, and Ordovician limestones and calcareous shales provide the physical environment of the Miami Whitewater Forest. The dense deciduous forest attracts many rare and unusual birds, and supports a herd of white-tailed deer seen frequently by park visitors. The Bowles Woods area is the nearest approach to a virgin beech climax forest found in this part of Ohio. Portions of the park are known to have been frequented by prehistoric Indians. Morgan's Raiders camped here during their invasion of Ohio in the Civil War.

Four youth camping sites, nature walks, self-guiding trails, and a lodge which may be reserved, are among the pleasing features provided. A special braille trail for the blind is located at this park. There is also a five-mile hiking trail at Miami Whitewater Forest. Of particular delight is a trail to Reservoir Overlook which gives a panoramic view of parts of Ohio, Indiana, and Kentucky.

SHARON WOODS
740 acres

On US 42, north of junction with US 25, south of I-275

The waterfalls of Sharon Creek, Sharon Lake, natural forests with wildflowers and flowering trees, and a gorge known nationally for its rare fossils combine to make this park beautiful and practically ideal for nature study. It abounds in prehistoric and pioneer history. An Indian Mound; Gypsy Hollow, which was the campsite for annual gypsy sojourns; and traces of a mill race are mute evidence of a rich past.

Two youth camps for sponsored groups with adult leadership, Adirondack shelters, a lodge, a deer pen, a museum, the services of a year-round naturalist, and hiking trails are provided for the appreciation and convenience of all groups.

SHAWNEE LOOKOUT
1,010 acres

In southwest corner of county on Brower and Lawrenceburg roads

Situated near the axis of the famous Cincinnati Anticline or Arch, on the hillsides and in the valleys of two large glacier-fed rivers which cut deeply into the Ordovician limestones and calcareous shales and covered with a thin veneer of Illinoian glacial till, this is a site of geologic magnificence. Quite understandably it is also the site of a fort built by prehistoric Indians 2,000 years ago and a lookout for tribes and war parties, the most recent being the Shawnees.

HAMILTON COUNTY PARK DISTRICT (Con't.)

The area overlooks the confluence of the Great Miami River and the Ohio River, the lowest spot in Ohio. Spectacular views are the reward of hikers who climb to the hilltops, particularly the one known as "the Point." The area abounds in wildlife, including a herd of white-tailed deer. The sanctuary along the Miami is a large acreage used as a nesting area for many species of waterfowl.

The park is undeveloped except for a marina on the Miami River. Hikers must obtain permits from the park district office and register with the park district ranger before entering the area.

WINTON WOODS
2,045 acres

A circle of land around the City of Greenhills. Reached from I-275, 1 mile due south on Winton Rd; use Hall-Winton Rd. exit

Situated on the hilltops and slopes of former pastures and cropland which are being reforested rapidly, this park has many good areas for study. Special geologic features called "sinkholes" are found at Sinkhole Knob. These are depressions formed on the surface of the ground as the underlying limestone dissolves and the surface rocks collapse. The area is underlain by bedrock of the Ordovician period of geologic age which may be explored for fossils where exposed by erosion.

The lake and valley of the West Fork of Mill Creek is a flood control reservoir for the industrial plants. Guides for the excellent hiking trails are available. Three youth camping sites, family camping, boating and scheduled sightseeing boats, picnicking, nature walks rotated in all three developed parks, as well as lectures and films may be enjoyed.

INDIAN HILL SCHOOLS OUTDOOR EDUCATION CENTER
40 acres

At northern end of Given Rd., Village of Indian Hill

This property borders the Little Miami River and Sycamore Creek in well-dissected Illinoian glacial ground moraine. Much is bottom land of sycamore, cottonwood, maple, and box elder. Plantings have been made of tulip, oak, and pine, and some land has been left in weed patches, tall grass, and mowed playing field. Along the river are islands, pools, shallows, rapids, and exposures of fossiliferous Ordovician limestones and shales.

A large limestone farmhouse built in 1802 serves as the base of operations. In the house are meeting rooms, live animals on display, a small nature museum, collections of pioneer and farm artifacts, and a library. Other buildings have additional classroom space, storage, and a collection of horsedrawn farm implements.

Activities center on the plant and animal communities indigenous to the area as well as rural life in early Ohio. Classes explore the basic habitats of field, stream, and woodland, collect fossils, work on service projects, plant a garden and wildlife food, and try out various old tools. Teacher workshops, garden clubs, and university classes meet at the center.

Robert C. Terwilleger
723 Floral Avenue, Terrace Park 45174
(513) 831-0149

Shawnee School
6100 Drake Road, Indian Hill, Cincinnati 45243
(513) 561-8686

NEWTOWN STATE FISH FARM
18.13 acres

South of SR 32 at Newtown

A good stop on a field trip might be this site where there are 21 rearing and holding ponds for a wide variety of fish. Fourteen ponds are used in rearing muskies, while seven ponds hold fish for experimental and research purposes by the Ohio Environmental Protection Agency's fish laboratory, which is located here. Of interest historically is the fact that the first blockhouse in Anderson Township was erected in 1792 on the fish farm site.

Manager
Newtown State Fish Farm
3433 Church Street Cincinnati 45244
(513) 561-7336

RUOFF FAMILY FARM
73 acres

9579 Brehm Rd., Cincinnati

This typical old family farm, situated on scenic hills overlooking the Great Miami valley, is a real working farm of unusual educational value. There are orchard-covered hilltops between corn patches and vegetable gardens. A 15-acre hayfield and 20 acres of pasture provide food for a large array of farm animals, which include sheep, cows, a mule, chickens, pigs, and ducks. Baby animals in pens constructed so that both children and adults can clearly observe and even pet them normally attract the greatest attention. The 100-year-old barn and other buildings house a beef cattle herd and other animals as needed.

A hayride down a country lane gives children an opportunity to see, taste, and touch the food which animals eat and learn how these fit into the natural environment and the human food chain. Seasonally, visitors may help make maple syrup, soap, pick or plant corn, or make apple cider.

A certified educational director and his staff make this a valuable experience particularly for first, second, and third graders.

The fees are reasonable.

Clifford Dolork
9579 Brehm Road, Cincinnati 45247
(513) 385-7065

SOIL CONSERVATION SERVICE FARM

100 acres

On West Kemper Rd. one-half mile west of US 127

Of interest here are the soil and water conservation practices demonstrated on a farm with 125 years of recorded yields and methods. The land is reported to be in the end moraine of early Wisconsinan glaciation. Several soil type variations and topographical changes due to the effects of the glaciers and erosional forces may be observed. Glacial land forms recognized as kames and eskers, which are sand and gravel deposits associated with the glacial boundary and stream deposits within the glacier, may be examined on neighboring farms.

Soil Conservation Service
3220 West Kemper Road, Cincinnati 45239
(513) 892-4044

HANCOCK COUNTY

CAMP BERRY

309 acres

6 miles south of Findlay, west of SR 68

A Boy Scout reservation, this site has a lake, a large creek, Ohio hardwoods of the beech-maple forest type, pine plantations, wildflowers, and many birds and small mammals. Geologically the area is glacial till plain, the soils high lime Wisconsinan till type, underlain by Silurian age Monroe dolomite. There is no evidence of rock except what has been transported by the glacier.

A winterized lodge and hiking trails lend themselves possibly to school camping, certainly for field trips.

Scout Executive
Put-Han-En Council
2100 Broad Avenue, Findlay 45840
(419) 422-4356

FINDLAY RESERVOIRS AND WATER STUDIES LABORATORY

160 acres

Off SR 568 on Co. Rd. 205 southeast of Findlay

Two upground reservoirs to meet Findlay's water supply needs lie southeast of town near the Blanchard River. The first was completed in 1949 with a capacity of 1.4 billion gallons. The second, built in 1969, has a capacity of 3.5 billion gallons. Upground reservoirs are so called because they are at ground level surrounded by dikes to contain the water. This complex is believed to be the largest of its kind in the United States. Water is pumped into the reservoirs from the Blanchard River, but not at flood stage when full of sediment; then it flows to the treatment plant by gravitation and pumping.

A trip to the reservoirs is a real treat as well as a learning experience, especially if students can arrange to visit the water laboratory at the first reservoir. Faculty and students at Findlay do considerable research at this station. The lake-like structures have sailboats in season, motor boats, a marina and people fishing on all sides. A multitude of ducks may be watched during migration time.

A complete tour of the important water treatment plant in Findlay can be arranged.

For the water studies laboratory at the reservoir contact:

Prof. A. Jack Wilfong
Findlay College
Findlay 45840
(419) 422-8313

To arrange for a tour of the plant contact:

Director of Utilities
Municipal Building
Findlay 45840
(419) 423-6711

VAN BUREN STATE PARK

216 acres

Off I-75 on SR 613

The impoundment of Rock Ford Creek provides a 60-acre lake which is surrounded for the most part by open park land. This is interspersed with some beech-maple woods. The area lies on the glaciated plain typical of northwest Ohio, where thick clay till averaging 50 feet covers the bedrock. This consists of a light gray dolomite which is the Guelph member of the Niagara formation of Silurian age. The resulting soils are known as high-lime till. Remnants of an old sand beach ridge, mapped as Lake Maumee, an early level of Lake Erie, are found in the vicinity. April through October is the most desirable period for visiting the park.

Park Manager
Van Buren State Park
Box 117, Van Buren 45889
(419) 299-3667

HARDIN COUNTY

MATSON NATURE STUDY AND RECREATION AREA

82 acres

On Co. Rd. 60, 1 mile north of SR 701

Hardin County is indeed fortunate to have this neat, attractive site available for field trips and advanced study programs. The natural beauty as well as the variety of habitats create awareness and appreciation of the natural environment and an understanding of the relationships of physical environment to plant and animal life.

The property contains 40 acres of woodland with a large number of native tree species. The forest extends from thin open areas to very dense ones, in all sizes from saplings to large mature trees. A one-acre pond, swamp, and open park glades give a wide variety of habitats for birds and small mammals. Newly planted pines and shrubs provide additional shelter. Stimulating nature trails have been developed.

Manager
Matson Nature Study and Recreation Area
Route 1, Dola 45835
(419) 634-5217

SAULISBURY PARK

199 acres

Off SR 67, 1½ miles south of Kenton

Prior to the Depression, this property was an active quarry providing dolomitic limestone of the Monroe formation for a cement plant. Because it was necessary to remove several feet of soil and glacial till which covered the rock layers before the limestone could be mined, the material was scraped to one side and presently forms hummocky [illegible] beside the lake.

The rock was removed to considerable depth, making a long and deep body of water. The lake is stocked with fish and used extensively as a recreation area. Some shallow areas, natural soil profiles, clumps of original and successional vegetation, and exposures of the bedrock and glacially carried material provide ample basis for ecological studies.

Fees are required for recreation groups, but school classes may negotiate.

Manager
Saulisbury Park
224 West Kenton Street, Kenton 43326
(419) 673-0886

HARRISON COUNTY

BAKER RIDGE NATURAL AREA

178 acres

1 mile south of Jewett

The Jewett Sportsman Club has developed a coal stripping area into a wildlife reserve. The site contains two lakes and a large amount of woodland, some natural and some a result of reforestation. It provides habitat for birds, deer, rabbits, and other small mammals native to Ohio.

Groups with qualified and responsible adult leadership may gain permission to use this area. Facilities include a winterized lodge.

Clark Leeper, President
Jewett Sportsman Club
Jewett 43986
(614) 946-5455

BUCKEYE TRAIL

25 miles

From Piedmont Marina to Bowerston via Tappan and Clendening reservoirs

A high ridge trail overlooking a countryside primarily of rolling farmland takes the sign of the blue blazes from Piedmont Dam to Lake Clendening. It leads along this lake shore for 2½ miles, then traverses farms and woodland to Tappan Lake. The four miles along Tappan are in pine plantations, a part of the erosion control vegetation established soon after the construction of the flood control reservoir. North to Bowerston the countryside is similar except for a great dogwood and redbud show of springtime flowers in the valleys.

The trail is located far beyond the area of glaciation but the streams may be slightly modified by glacial drainage. The region lies in Pennsylvanian age sandstones, shales, and coal formations. Exposures of the Upper Freeport coal and sandstone, Lower Freeport, Clarion, Ames limestone, and Middle Kittaning coal (in the south part of the county) may be observed.

Facilities are available at the dam sites and roadside parks. For maps and further information, contact:

Buckeye Trail Association, Inc.
P.O. Box 254, Worthington 43085

CAMP TIPPECANOE

1,100 acres

Off SR 800 on north side of Lake Clendening

Situated on rolling and sometimes rugged terrain along the quiet lake, the campsite includes 200 acres of mixed hardwood forest and pine plantation, a creek, rock exposures of the Pennsylvanian series of sandstones, shales and coal, and fields in natural succession. Hiking trails or canoes may be used to reach nature study areas. Winterized

lodge and heated cabins make year-round camping feasible. Six school systems conduct a school camping program at this site.

YMCA Camping Executive
405 - 2nd Street, NW, Canton 44702
(216) 456-7161

CLENDENING LAKE

Land 4,500 acres Water 1,800 acres

On SR 800 east of Tippecanoe

A long narrow lake is the result of impoundment of the [illegible] Fork branch of Stillwater Creek. An earth dam 68 feet high and 950 feet long controls the drainage of 70 square miles. The Muskingum Conservancy lands are extensively forested with both old hardwood stands and new pine plantations and are dedicated by the district as a wilderness area. Considerable adjacent land is owned by Scout and other youth groups which follow conservation principles, creating a total wilderness area of approximately 20,000 acres.

Muskingum Watershed Conservancy District
1319 Third Street, NW, New Philadelphia 44663
(216) 343-6647

FAITH RANCH

1,250 acres

Near Jewett on SR 9

This large acreage, part of which was strip mined 25 years ago, offers a multitude of possible ecological studies and field trip opportunities.

The area lies in the intensely dissected Allegheny Plateau region of Ohio underlain for the most part by Pennsylvanian age sandstones, shales, and coals. Made hilly by 250 million years of erosion, this unmolested, wooded area has many wildflowers and animals, especially birds. A five-acre lake, some small ponds left after surface mining, as well as swamps and marshy areas provide many forms of aquatic habitat. Rock formations exposed in mining are fortuitous discoveries for the ecologist who wishes to understand the coal measure sequences or cyclothem. The process of natural reclamation with its problems and achievements may be observed.

A winterized lodge makes research programs possible even in inclement weather.

Faith Ranch and Farms, Inc.
Jewett 43986
(614) 946-2255

HARRISON STATE RECLAMATION AREA

1,321 acres

3 miles south of Jewett on SR 9

Extremely rugged topography with highwalls of Pennsylvanian age sandstones, limestone, coal and shale and

steep spoil banks are typical of this extensive acreage. Part of the land was surface mined before the 1972 Ohio Strip Mine Law, with its stringent reclamation requirements, was enacted, and it reflects the problems of erosion and acid mine water drainage. This and more recently surface mined land was purchased by the state in 1960 for the purpose of reclamation. Presently, there is young growth of elm, ash, and maple trees, with rabbits and deer frequently seen.

The Harrison Reclamation Area is managed by the Ohio Department of Natural Resources, Division of Forestry. The area has been reforested with white pine and European black alder and developed for recreational purposes with sites, hiking trails, and a rifle range and trap shooting area. These facilities are available on a first-come, first-served basis. The area also serves as a public hunting and fishing area, and all lakes have been stocked with largemouth bass. Further development is being contemplated at this time.

Forest Ranger
Fernwood State Forest
Box 366-A, Route 1, Bloomingdale 43910
(614) 264-5671

SALLY BUFFALO PARK

408 acres

On SR 9, south of Cadiz

A reclamation area of the Hanna Coal Company, this park is provided for use by all who can enjoy and not destroy. It is named for the Sally Buffalo Creek, which in turn derived its name from the operator of a grist mill on that stream.

The vegetation on the strip mined land is youthful but beginning to restore beauty and erosion control. Native sycamores, maple, and oak are found distributed through the acreage. Small mammals and birds are present, and waterfowl may be observed on the large lake during seasonal migration.

Arrangements may be made with the company to have a tour of the area, which would include a view of a large overburden-removing shovel in operation, and a rock wall with the Pennsylvanian age sandstones, shales, coal seams, and limestone exposed. Of interest is a comparison of unstripped farmland with the reclamation area and the fields

of crown vetch planted to restore soil fertility and feed livestock.

Manager
Sally Buffalo Park
Cadiz 43907
(614) 942-3116

SNOW BOWL SKI AREA

327 acres

Off SR 9 north of Cadiz

Although land was cleared to establish a ski run, much of this property remains in a natural state. Heavily forested portions are in the mixed oak forest type with a lush display of wildflowers in the spring. Conifer plantings are extensive, and the area abounds in beaver, muskrat, woodchuck, deer, and smaller mammals.

The area is well beyond the line of glaciation; the topography—rounded high hills—is typical of the highly dissected Allegheny Plateau in Ohio. The rocks exposed are the sandstone, shale, limestone, and coal pf Pennsylvanian age. Trails have been developed through the woodland; springs and streams support water life. A modern lodge may be reserved, cost to be negotiated.

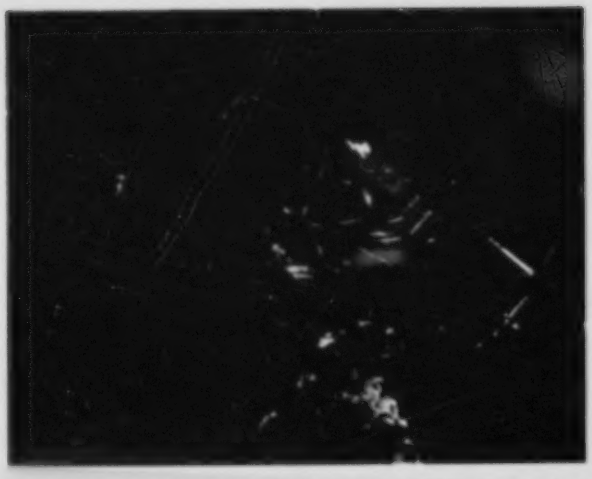
Manager
Snow Bowl Ski Area
546 Grant Street, Cadiz 43907
(614) 942-2051

TAPPAN LAKE

Land - 4,790 acres Water - 2,350 acres

On US 250, 10 miles east of Dennison

A substantial body of water with extensive lands surrounding it provides flood and drought control, recreation sites and scenic beauty. Tappan Dam is one of 15 constructed in the Muskingum Watershed. Tappan, completed



in 1936, was one of the earliest ones. It is one of three dams on Little Stillwater Creek, a meandering tributary of the Tuscarawas River. An earthfill dam, 52 feet high and 1,550 feet long, it controls the drainage of a 71-square-mile watershed.

The area is beyond glaciation, in the maturely dissected hills underlain by the Pennsylvanian series of sandstones, shales, coal, and limestone. The shores of the lake are heavily wooded, and two islands add diversity in habitat. Great blue heron use the more shallow areas of the lake.

Good camping facilities, cabin rentals, and picnic spots are available at the park; picnic facilities are also available at the dam and at a roadside park. There are several miles of hiking trails, including a segment of the Buckeye Trail.

Manager
Tappan Lake Reservoir
Box B-1, Deersville 44693
(614) 922-3649

HENRY COUNTY

DRY CREEK ACCESS

2 acres

On US 24, 1 mile west of Texas

This small plot is situated on lands of the abandoned Miami-Erie Canal. These in turn lie on the glaciated flat Lake Plain, an early level of an ancient Lake Erie. The site provides access to the Maumee River, which contains a large fish population. Associated aquatic organisms may also be observed. Seasonally migrating waterfowl are present, as well as limited numbers of upland game animals.

Division of Wildlife District 2 Office
952 Lima Avenue, Findlay 45840
(419) 422-6757

FLORIDA ACCESS

4 acres

On SR 424, 1 mile east of Florida

Upstream from Dry Creek Access near Napoleon, this site is on abandoned Miami-Erie Canal land and the glaciated smooth Lake Plain. The Maumee River contains fish populations of impounded stream varieties, such as bullhead, carp, and catfish. Migrating waterfowl may be observed in season. In the water habitat one may also find frogs, turtles, snakes, and insects.

Division of Wildlife District 2 Office
952 Lima Avenue, Findlay 45840
(419) 422-6757

MAUMEE RIVER PARKWAY

NORTH TURKEY FOOT AREA
486 acres

Downstream from Damascus Bridge on US 24

A recent acquisition of land on the Maumee River, this area is agriculturally developed land bordered by oak-hickory woodland. North Turkey Foot Creek empties into the river here, providing easily accessible aquatic habitats for study. Both the river and the creek, with their typical glacial stream valley profiles, may be examined for cut-banks, natural levees, alluvial flood plains and terraces. The streams have dissected the Lake Plains, a former Black Swamp province created by an early Lake Erie, the result of impounded glacial meltwater. The park is under development.

Division of Parks and Recreation
Department of Natural Resources
Fountain Square, Columbus 43224
(614) 466-2838

MISSIONARY ISLAND

296 acres

In river across from Farnsworth Park, which is one of Toledo's metropolitan parks

This delightful spot is on a flood plain island resulting from the resistance to erosion of the dolomite which is exposed at the northern tip of the island. Trees and flowers typical of flood plain vegetation predominate. There are some outstanding chinquapin oaks and hackberry trees. Deer, mink, and other small mammals abound. This was once the site of a large Ottawa Indian village and the first Protestant Mission school for Indian children. The park is still under development.

Division of Wildlife District 2 Office
952 Lima Avenue, Findlay 45840
(419) 422-6757

MAUMEE SHORES

5½ acres

On US 24, 1 mile east of Texas

The unusual owners of this unique retreat on the north side of the Maumee River are willing to share their rich natural history with limited numbers of appreciative students. The property has a river pathway that explores the bedrock and vegetation along the shore. Numerous species of trees, including maple, walnut, hickory, and honeylocust as well as assorted conifers, are found in the yard and along the old canal towpath and bed. Prairie flora are among the luxuriant flood plain vegetation accessible along the trails. An intriguing rock collection including glacial boulders adds charm and variety to the ecological picture.

One of the owners is an experienced student of nature and will serve as a resource person for the group.

Dr. and Mrs. Paul Moeller
2576 Brookwood, Columbus 43209
(614) 235-0277

HIGHLAND COUNTY

BARRETT'S MILLS

80 acres

2 miles south of Rainsboro and US 50 east of Hillsboro

The restoration of this early water-powered grist mill and pioneer village is being made by a private company. A covered bridge, woolen mill, blacksmith shop, and country store are included in the restoration program. The site is now listed in the National Register of Historic Places.

Barrett's Mills is situated at a waterfall on the Rocky Fork gorge. Foot trails lead through the narrow valley and along the dolomite cliffs. Numerous large trees of the beech-maple forest type, an abundance of wildflowers typical of neutral soils, and forest animals may be seen.

Months for visitation are April through October.

Manager
Barrett's Mills
Box 235, Rainsboro 45165
(513) 365-1115

BUCKEYE TRAIL

31 miles

From Cuyahoga post village of New Market to Indian Creek State Wildlife Area

Open rolling country characterizes the route west from Pike County, with the trail skirting the south side of Rocky Fork Lake. From here westward the countryside is gently rolling farmland. An exception is Cobb's Hill near Danville, a knob marking the Niagara escarpment, a change in bedrock from the thin limestones and calcareous shales of Devonian age to the more massive resistant dolomite rocks of Silurian age.

For maps and further information contact:

Buckeye Trail association, Inc.
P.O. Box 254, Worthington 43085

FALLSVILLE STATE WILDLIFE AREA

1,211 acres

On SR 72, 3 miles southeast of New Vienna

This extensive property lies in the terminal belt of rock Moundsmanglacial drift. The topography is gently rolling to flat, though dolomite hills of Silurian age rock rise to the south. A rocky waterfall at a former mill site is a feature typical of the Niagara formation in many parts of the country.

A spring known as "Buckeye Spring" seeps from a rock layer containing fossils. Fall Creek, a tributary of Clear Creek and subsequently Brushy Fork, runs through the area. Several small ponds provide habitat for fish, game, fish, and waterfowl, especially during spring migrations. Wooded areas are primarily oak, hickory, beech, and walnut.

Area Manager
Fallsville State Wildlife Area
Route 1, New Vienna 45159
(513) 987-2369

PAINT HILL STATE MEMORIAL

1,247 acres

On SR 41, southeast of Middleton

Paint Hill contains one of the best preserved prehistoric Indian mound enclosures in the state. Experts theorized it was several factors. At the site, built by now-extinct and grass varieties of plant and animal life. Brush Fork, a tributary of Miss Brush Creek, has formed a gorge here. At the rim, exposing at the top the rock layers, Mississippian limestone underlaid with shale used by the Indians to form the wall around their village. The construction of this rocky and earthen wall was a major accomplishment for a people in the area. No more extensive ruins. Though cleared for the park, remnants of Miss Brush are found on the side of the hill. A road, and a trail can lead of the bridge across Brush Fork affords a view of a section of Ordovician limestone.

The variety and abundance of plant and animal life is great because of the diversity of soils and terrain. The dolomite gorge on the floor is rich in glacial relict vegetation such as Canadian yew, the hallmarks (a northern plant all but exterminated by glaciation), and the walking fern. On the cliffs are found Walter's violet and Curtis's mountain lover, a southern Appalachian plant. On the shales grow the rare Carolina pink, Canada violet and trees familiar wildflowers are plentiful also. Unusual birds as well as the more common ones may be found during the nesting season.

A new museum interpreting the natural and prehistoric features of the site is open 9-12 a.m., 1-5 p.m., except Mondays, March to November. Brochures and guides are available.

The Ohio Historical Society
Columbus 43211
(614) 469-4900

OLDHAGO STATE WILDLIFE AREA

139 acres

On CR 32, 3 miles west of Middleton

Although the area is crossed over the Ordovician Niagara escarpment, the topography is quite modified by glacial deposits of sandstone limestone gravel. At its eastern rim is calcareous limestone in rock outcrops.

The property is managed as marshland ponds and for species of wildlife. Nesting boxes are offered, such as wood ducks, raccoons, muskrats, fox and gray squirrels, birds and opossums. Three ponds provide habitat for fur species, fish, and other aquatic animal and plant life. Wooded areas are primarily oak and hickory.

Division of Wildlife, District 5, Office
Route 1, Delhi 45169
(513) 773-2060

PAINT CREEK STATE PARK

930 acres
under development

West of Bainbridge, off U.S. 50

Recently acquired from the U.S. Army Corps of Engineers, Paint Creek is little developed at the present time. The well-wooded, rugged valley is carved out of Silurian dolomites. A number of major forest types occur within the park boundaries, and the variety of wildflowers is amazing. There are a few roadways which give access.

Park Manager
Paint Creek State Park
Route 2, Bainbridge 45612
(614) 365-2762

ROCKY FORK STATE PARK

1,869 acres

On U.S. 50 and SR 124 east of Hillsboro

Rocky Fork of Paint Creek was impounded to form a large lake and park in the rolling hills of this county. The scenic topography of the land surrounding the upper part of the lake is due to the covering of Illinoian glacial drift which filled the early stream valleys many thousands of years ago. This is in contrast to the more rugged aspect of the lower valley near the present dam, which exposes the resistant dolomite rock through which Rocky Fork cuts its way. Crowded by the early glacier, the stream was forced to erode a new valley near its junction with Paint Creek. Native ecology is revealed in the several hills of waterfalls along the lake.

The park area is extensive, partially forested with various hardwoods, woodlands on the slopes, beach-height accessibility on the uplands. Creek marsh habitats are available. Waterfowl and shorebirds may be seen during migrations.

The services of an interpretive naturalist may be obtained during the summer months.

Park Manager
Rocky Fork State Park
Route 4, Box 362, Hillsboro 45133
(513) 393-4284

SEVEN CAVES

100 acres

On U.S. 50, 1 miles west of Bainbridge

A more picturesque and exciting hiking area would be hard to find. The Seven Caves are situated at the junction of Paint Creek and its tributary, Rocky Fork close to the Wisconsinan glacial boundary. Both streams were affected by glaciation; Rocky Fork was crowded by the glacier and cut the deep gorge as the meltwater accumulation gave it power to erode through the resistant dolomite formations of Silurian age. The thickness of the Peebles dolomite alone is 90 feet along Rocky Fork in this area.

These trails have been developed to give the hiker access to the caves, the deep rugged gorges, winding streams with waterfalls, and the lush vegetation on the rocks and in the valleys. The caves are solutional openings along the joints and bedding planes of the rock formations. They are not only interesting geologically but are rich in Shawnee Indian lore and pioneer history. Bear Cave is thought to have been the hibernating retreat of bears many years ago. Furthermore, the Cliff House is poised on the top of the gorge.

Though a fee is required for entrance, the possibility of exploring it is unusual and should be seriously considered. The best all-year for visitation is from March to November.

Manager
Seven Caves
Bainbridge 45612
(513) 365-1283

HOCKING COUNTY

BUCKEYE TRAIL

17 miles

The trail proceeds from the southeastern corner of the county near Salt Lick, north through Cedar Falls and Old Man's Cave, through the northern part of the Hocking State Forest to Lake Logan, and past the town of Glouchester and Long Hollow to Murray City.

The Hocking County segment of the trail system is one of the most scenic sections. Winding paths and up and down ridges likely have unknown overhang. At the high and old hill trail, at Old Cave, or through the glacial erratic forest, hands to the cool caves, up past Old Man's Cave and to towering hemlocks, through deep holes of second hardwoods and conifers to Cedar Falls. An trail affords an opportunity to see many types of habitat and association.

It crosses over and travels along the Hocking River by roadway and path, past interesting landmarks of Mississippian age and the scene of a bank period, by Rockmenhen. Near the lookout is Archaeological landmarks, Adena, and Hopewell. Public parks and private landowners provide crossing places. Well marked with blue blazes, the Buckeye Trail through the county is a challenge physically and intellectually.

For maps and further information contact:

Buckeye Trail Association, Inc.
P.O. Box 254, Worthington 43085

CAMP AKITA

1,043 acres

6 miles east of Sugar Grove on Co. Rd. 32

A large acreage in the Hocking Hills gives Camp Akita a wide picturesque base of operation. Much of the area is wooded with mixed hardwoods and conifers, including the hemlock and yew as well as wildflowers more commonly found in the north. The forest provides good cover for a wide variety of wildlife which, for the same reason, may be difficult to observe. A canyon cuts through the Black Hand conditions and makes the study of rocks, stream erosion and deposition, vegetation, and Indian history feasible and fascinating.

Akita has been used for school outdoor education work. Its size and lends itself well to this purpose. It has a large rustic lodge, cabins, dining facilities, outpost, and shelters. Fees depend on size of group and facilities required. Akita is a member of the American Camping Association and is an ACA Accredited Camp.

Director
Camp Akita
Route 2, Logan 43138
(614) 385-3627

CAMP BECKONING TRAILS

100 acres

East of SR 93, 3 miles south of Logan

A panoramic view of the countryside, including the Hocking River valley, is one of the many joys in visiting this site. In the Hocking's dissected Allegheny Plateau, the undulating topped hills have their resultant soils of the acid type.

The trails make it apparent that the camp is well named. They lead through the forest of oak-hickory association as well as edge of forest and old fields in natural succession. A self-guiding nature trail through unusually rich flora provides an excellent experience. An attractive lodge, winterized, has cooking facilities and sleeping space for 36 persons.

Camp Registrar
Seal of Ohio Girl Scout Council
P.O. Box 24, 1293 Hubbard Road, Gallipolis 45719
(614) 446-1381

CAMP GUNSHELLS

100 acres

In Rio on Township and road following the Hocking River [illegible]

[illegible] Hocking Hills State Park has [illegible] and [illegible] of the Black Hand sandstone, [illegible] Rockbridge. Both these [illegible] Hocking Hills State Park has [illegible] significant, [illegible] [illegible]

mosses, and liverwort in damp places on the rocks show the beginning of rock weathering by means of plants. There are areas where the loosely cemented sandstone is breaking down to reveal the soil-making process. Potholes in the stream and other erosional features, flood plain deposits, and rock terrace levels contribute to the geologic story.

Some of the hillsides above the Black Hand formation are fields returning to woodland. Many dogwood, tupelo, sourwood, sassafras, hop, thorn, sumac, and Virginia pine are now growing here. The heavily forested woodland is of mixed hardwoods with a pleasing abundance of young tuliptree and maple. The understory of plants includes beds of trailing arbutus, pipsissewa, partridgeberry, laurel, and rattlesnake plantain. These are remnants of an early glacial climate. Hemlock, too, is found in the cool ravines. Birds and evidence of other animals are abundant in the many varied habitats.

The Buckeye Trail proceeds through the property and some little-developed trails lead into the fascinating woodland. The site is rich in history; a log cabin, farmhouse, bridge, and millsite are witness to man's impact many years ago. A small lodge, the farmhouse, and tent units constitute the facilities.

Camp Registrar
Seal of Ohio Girl Scout Council
P.O. Box 24, 1293 Hubbard Road, Gallipolis 45719
(614) 446-1381

CAMP GREENHILLS

1,300 acres

On U.S. 33, southeast of Logan

This Boy Scout reservation is used primarily for primitive camping. Located in the sandstones, shales, and coal formations of the Pennsylvanian period, the area has rolling hills, less rugged than the Hocking Hills in the western part of the county. There are many acres of mixed hardwood trees, including oaks, hickories, maples, cherry, dogwood, sourwood, shadbush, and other plants typical of mixed woodlands. Rocky streams and hillsides provide habitat for many forms of animal life, including birds.

Two training lodges with dining facilities for 50 people each, a health lodge, and two director's cottages constitute the housing facilities.

[illegible] Ohio Council, Boy [illegible] of America
1629 East Broad Street, Columbus 43203
(614) 253-5313

CAMP KLAILES

70 acres

[illegible] east of Old Man's Cave on SR 664

This property, adjacent to the Hocking Hills in the Rock Hollow–Old Man's Cave and South Bloomingville [illegible] camp surrounding, [illegible] [illegible]

returning by natural succession to woodland. Adjoining acres of forest contain mixed hardwood trees, wildflowers, birds, and other small animals. The proximity to a state property with extensive woodland trails makes it an advantageous site. The property was acquired recently by the Boy Scouts of America primarily for use by Explorers.

Central Ohio Council, Boy Scouts of America
1629 East Broad Street, Columbus 43205
(614) 253-5513

CAMP OTTERBEIN

426 acres

On SR 328 south of Logan

Approximately 100 acres of forest with some virgin timber highlight this area situated among the rolling Hocking Hills. Since 1949, 65,000 pines have been planted on formerly cultivated land. The underlying rock strata are the coal, sandstone and shale beds of Pennsylvanian age, much less prominent in exposures than the resistant Black Hand sandstone beds just a little north and west, yet the geologic story is well disclosed. There is evidence of the iron ore mining which was a part of the history of the area during Civil War days. An old stage coach road passes through the camp.

A lodge-dining hall, sleeping cabins, covered wagons, and an outpost camp are available for school or group use during fall and spring months. Six cabins have been winterized for year-round use. There is no charge for field trips.

Manager
Camp Otterbein
Route 3, Logan 43138
(614) 385-1712

CAMP CITY CREEK

126 acres

2 miles northwest of Old Man's Cave on SR 374

A broad upland field provides a level area for facilities and recreation at Camp City Creek. Most of the acres are in forest, however, with rocks ranging into the Black Hand sandstone making scenic and challenging trails areas. Mixed hardwood trees and conifers create a natural environment for the wild plants typical of the acid soils of this area. An extensive trail system has been developed to interpret and bring attention to them. Rare birds and other small animals are abundant.

A rustic, winterized lodge contains a food preparation and serving center. Sleeping cabins, health center, restrooms, and showerhouses complete the accommodations. The camp is being used primarily by schools for outdoor education workshops and field trips.

Manager
Big Brother Association of Columbus and Franklin County
2106 Tuller Street, Columbus 43207
(614) [illegible]

CAMP WYANDOT

450 acres

In Clear Creek Gorge 3 miles west of SR 33, south of Lancaster

Camp Wyandot is situated along Clear Creek, one of the most scenic tributaries in the Hocking River watershed. The creek lies on the northern border of the camp with several smaller streams draining into it. One of these was dammed to form a lovely summertime lake.

Most of the area is wooded with oak-hickory in narrow, cool ravines. Rhododendron, laurel, partridgeberry, trailing arbutus, striped wintergreen, and many ferns grow in the acid soils on the hillsides.

Outcrops of the Black Hand sandstone, the Mississippian age rock formation responsible for the rugged topography of the region, contribute greatly to the scenic qualities of the site. The unusual plant and animal life as well as the physical environment provide an excellent basis for ecological studies.

A large dining lodge, sleeping cabins, health center, shower houses, and camp kitchen units are available. Facilities are not winterized.

Manager
Columbus Area Council of Camp Fire Girls
718 South High Street, Columbus 43215
(614) 443-8713

HOCKING HILLS CAMP

360 acres

On SR 328, one-half mile north of Union Furnace

For a primitive outdoor experience in an area far removed from man's habitation, this camp site is well situated. The rolling topography is typical of the well-dissected Allegheny Plateau underlain with Pennsylvanian age rock strata. Outcrops capped with moss occur in the deep ravines below the wooded hillsides. The forest is the mixed oak association with a concentration of large hickories at one particular campsite appropriately named "Hickory Haven."

Eighty acres of the land is in natural succession and many acres of previously farmed land have been planted in pines. Cooking is done over open campfires, eating under open shelters, sleeping in canvas-covered hoggans. Several long trails, two ponds, and a variety of birds and small animals are attractive trails features.

Modest fees are charged.

Presbytery of Scioto Valley
United Presbyterian Church U.S.A.
c/ Crosswell Road, Columbus 43214

Frank E. Allen
Route 1, Box 334, Athens 45701

(614) [illegible]
[illegible]

HOCKING HILLS STATE PARK AND HOCKING STATE FOREST

Park - 1,942 acres Forest - 8,854 acres

Southwest of Logan, off US 33 along SR 374 and 664 to SR 56, which serves as a southern boundary of the area

This extensive acreage, possibly unequalled in Ohio for scenic beauty, was secured for preservation and recreation purposes. The rugged topography is largely due to the geologic story which is related in the deep gorges terminating headward in large coves, in the beautiful waterfalls cascading over vertical cliffs, and in the large overhangs carved by erosion and weathering from an extensive sandstone stratum. This is known as the Black Hand sandstone and conglomerate of late Mississippian age, a sedimentary formation originating along shifting shores of an ancient sea, the loose sand and gravel cemented together in varying degrees of compaction.

Purchase of the "Hocking Caves" began in 1924 after the area had experienced a lively Indian and pioneer history. Mixed hardwoods and conifers were and are the typical vegetation. The once-cultivated hilltops were covered with plantations of Scotch, red, and white pine. Glacial relict vegetation of hemlock and yew with many ferns and small heath plants are found in the cool, moist canyons and ravines. Once a hunter's paradise, the forests and ledges still provide food and shelter for deer, fox, and other small animals. Birds are abundant for early morning hikes.

Six sites in the Hocking State Forest have been developed as state parks. All are similar in their history, vegetation, and geologic background. But each has some distinguishing characteristics which make it outstanding in its own right.

A naturalist is on duty from mid June to Labor Day.

Park Manager
Hocking Hills State Park
Route 2, Logan 43138
(614) 385-6841

ASH CAVE

Approximately 90 acres

On SR 56 in southern part of county

This park is usually regarded as the most spectacular because of the magnitude of the sandstone overhang. The projecting rock, shaped like a giant horseshoe, is 700 feet around the bend from one end to the other, 100 feet from the front edge to the back wall of the cavity, and over 90 feet high. A stream plunges over the cliff into a small pool at the front of the cliff. The tremendous overhang has been used extensively for camp meetings, has a natural "pulpit rock," shelter for a large audience, and remarkable acoustics. The horseshoe cavity received its name from the huge pile of ashes found there when white man first discovered it. These ashes are thought to be the residue of countless Indian campfires.

One of the most beautiful areas of the park is reported to be on the south side of the picnic area on the north-facing hill that overlooks the parking and picnic area. During April and May this hillside displays the most magnificent concentrations of wildflowers to be seen in the region. A balanced stump block of Black Hand sandstone and some unusual honeycombing on the overhang are additional features to observe.

CANTWELL CLIFFS

Approximately 60 acres

On SR 374, the park are farthest north

The gigantic precipice, 150 feet high and shaped like a horseshoe, was caused by the headward erosion of Buck Run. As the valley was eroded, the Black Hand sandstone formed one steep escarpment after another, each having resulted from the undermining of the resistant upper zone of the formation through weathering and erosion of the weak middle zone. The lower trail winds its way through large stump blocks which have fallen from the cliff. These are due to weathering along vertical joints in the rock and the

HOCKING HILLS STATE PARK AND HOCKING STATE FOREST (Cont.)

force of gravity. Masses of concentrated iron oxide are evident in many places, forming long, elliptical, reddish-brown concretions. On top, additional trails proceed along the rim of the precipice. Near the end of the East Rim Trail is Lookout Point from which the picturesque rock recess and the wooded valley may be viewed.

CEDAR FALLS

Approximately 40 acres

On SR 374, halfway between Ash Cave and Old Man's Cave

Of all the park areas, Cedar Falls has retained more of its natural, unspoiled beauty than any of the others. This is due in part to its remoteness and in part to the limited accommodations for visitors. The face of Cedar Falls is crossed by the deep grooves through which the water flows. These grooves were formed by the abrasive action of small sand particles as they were carried swiftly by the stream. Evident also is an erosional pothole formed when the stream was caught in an eddy in times of heavy flow. A deeply wooded gorge at the base of the cliff contains many hemlock; one, a towering giant of 149 feet, is thought to be the largest in Ohio.

CONKLE'S HOLLOW

Approximately 120 acres

A short distance from SR 374 between Old Man's Cave and Rock House

Towering walls of Black Hand sandstone nearly 250 feet high, a deep rocky gorge so narrow that in places the distance at the top from cliff to cliff is less than 300 feet, the tall trees and profusion of other vegetation on the valley floor, the series of waterfalls cascading over moss-covered rocks from small side valleys—all contribute to a feeling of mysticism and grandeur. The natural forces creating this site were the same as those operating throughout the entire Hocking Hills area—the dramatically picturesque topography resulting from rock weathering and stream erosion, the lush vegetation from ample moisture and protection. Carpets of partridgeberry, beds of orchids and other wild flowers, and many varieties of migrating and nesting birds add even more scenic attraction.

Facilities are limited and the trail leading to the gorge is about one-half mile long—both facts helping to protect the area from unappreciative hikers.

OLD MAN'S CAVE

Approximately 150 acres

On SR 374 and 664, west of Logan

The most popular of all the Hocking areas, this gorge is both outstandingly beautiful and geologically significant. In addition, it has many surprising tunnels, staircases, and panoramic views.

The best way to get the geologic story as well as to see the three miles of varied woodland, is to travel downstream beginning at the head of the gorge. Old Man's Creek tumbles over a series of ledges formed by the resistant upper layers of Black Hand, and falls 40 feet to a plunge basin. Below this, undercut ledges and numerous potholes, including a large one called "The Devil's Bathtub," indicate intermittent strong erosional stream flow. The potholes were the result of grains of sand and gravel being caught in eddies and carving progressively bigger indentations in the less resistant middle zone of sandstone.

In the north wall, near the lower end of the upper gorge, is the main overhang known as Old Man's Cave. Here a fugitive hermit is reported to have spent the last years of his life. The cliff, 75 feet above the stream and 300 feet long, extends over a cavity cut into the same weak middle zone of the Black Hand. Beyond this overhang is a huge block of the formation which has separated from the wall by weathering along a vertical joint. Another large overhang occurs downstream. A resistant lower layer of the Black Hand holds up the lower falls while the recess cavity below has been cut back into the soft Cuyahoga shale. The contact of the two formations is a striking geological phenomenon.

On the face of the lower falls is the profile of an old man, an erosional feature in the rock. A towering precipitous cliff beside the waterfall exposes the entire section of the Black Hand.

Hocking Hills Lodge, well removed from the picnic areas, overlooks the gorge downstream from the overhang.

ROCK HOUSE

Approximately 160 acres

On SR 374, 1 mile south of SR 180

Although Rock House is formed in the same Black Hand sandstone as the other park areas, its features are quite

HOCKING HILLS STATE PARK AND HOCKING STATE FOREST (Cont.)

different. The resistant upper part of the formation makes a roof over a mass of rock weathered into sets of vertical joints and horizontal bedding planes. The result is a large corridor with "windows" looking out on the valley. By freezing and thawing and seepage of water through the weaker middle section of the formation, the crevices have become enlarged, but instead of falling away in large slump blocks, as in the other areas, the major portions remain attached. The high cliff of 100 feet, which is a continuation of the inner wall of the Rock House, was formed by headward erosion and has a waterfall trickling over it even in dry seasons.

The park has well-developed trails which afford access to the Rock House and give an opportunity to observe liverwort, lichen, and moss coatings on the rock, a wide variety of hardwood trees, ferns, and the persisting glacial relict vegetation. This includes huge hemlocks, yew, and various members of the heath family.

One trail leads to a fire tower which gives a good view of the Hocking Hills region. A fire warden will demonstrate triangulation for fire location and fire fighting methods if requests are made well in advance.

HOCKING VALLEY SCENIC RAILWAY

13 miles round trip

Station 3 miles south of Nelsonville on US 33 in Athens County

A brief glimpse into southeastern Ohio's industrial past, including the sights and sounds and smells of a chugging locomotive, is a rare educational treat for children and adults living in the automobile age. The Hocking Valley Scenic Railway is a remnant of a C & O line which was formerly a lucrative branch of the Columbus, Hocking Valley and Toledo Railway serving mining communities. In service now on the railway is steam locomotive Number 33, formerly used for hauling heavy iron ores to Great Lakes ore ships in northern Michigan, and two passenger cars which transport delighted patrons along the famous Monday Creek.

Raconteur emphasize the history of the railroad and mining as the train passes outcrops of Pennsylvanian age coal, sandstone, and shale. Lush flood plain vegetation and heavily wooded hillsides with sparsely distributed homes tend to obscure evidence of earlier hill country activity.

Rides are scheduled May through October, Saturdays, Sundays, and holidays, with four trains leaving daily at various time. Groups are accommodated. A reasonable fee is charged.

Frederic A. Goodman, Secretary
Hocking Valley Scenic Railway
40 West Tompkins Avenue
Columbus 43202
(614) 268-0516

HOLIDAY HAVEN

480 acres

At Buena Vista on Co. Rd. 24, 8 miles northeast of Laurelville

Holiday Haven is a family-owned recreation area. Two small lake have been made for this purpose but provide many site for water-related plant and animal studies. Most of the area is roughly rolling and wooded. One ravine is especially rugged, with cliffs and overhangs of Black Hand sandstone. Hemlock, laurel, sour-gum and tuliptree are abundant in the mixed forest association. Hiking trails provide access for seeing and enjoying the wildflowers and small animals typical of the area.

Manager
Holiday Haven
Route 2
Rehoboth 43103
(614) 969-2011

LAKE LOGAN STATE PARK

715 acres

Off US 3 on SR 664 north of Logan

Logan Lake, covering approximately 400 acres of rolling Hocking County farmland, was impounded primarily for

recreation purposes. The 300 acres surrounding the lake contain natural succession vegetation for the most part, but a small oak-hickory woodland on the west side remains unspoiled. The water, woodland, and fields provide a variety of habitats worthy of observing.

Park Manager
Lake Logan State Park
Route 2
Logan 43138
(614) 385-3444

MODEL ENVIRONMENTAL STUDY CENTER

600 acres

Off SR 278, west on Co. Rd. 400 near Snake Ridge Fire Tower

This large acreage serves as an experimental research area for students of Ohio University but is extensive and varied enough to serve other groups as well. It is situated beyond glaciation on rolling hills underlain by Pennsylvanian age rocks. Some 120 acres are old strip mine lands showing the typical problems of erosion, pollution, sedimentation, and slow vegetational growth. Three hundred acres are in old field succession, 140 acres in beech-hickory forest, and 40 acres in pine plantation.

There are no facilities. The invitation to study the environmental relationships with a "look, touch, learn, but respect" attitude is a challenge for the teacher who is searching for field opportunities for student experimentation.

Dr. Ron Isaac
103A Porter Hall
Athens 45701
Ohio University
(614) 594-7119

ROCK BRIDGE

80 acres

North off US 33 at Fairview Cemetery near Rockbridge

This unusual and picturesque geologic feature is found at the head of a ravine not far from the Hocking River. Caused by headward erosion, the resistant part of the Black Hand sandstone formation remains as a bridge 50 feet across, six to 10 feet wide, with an arch 40 feet above the stream which has provided the erosive force. A wall of the sandstone and an opening between the shelf of rock and the bridge, together with the small waterfall, make a delightful setting for the rich flora of the area. Woodland of the mixed oak forest type surrounds the structure. Wildflowers, ferns, deer, fox, and other wildlife are reported to be abun-

dant. The bridge is dangerous to cross and the owner grants permission to visit on a no-risk basis.

Mr. Zora Crawford
Route 1
Rockbridge 43149
(614) 385-3974

ROLLING ACRES CAMPGROUND

100 acres

On Chapel Ridge Rd. off SR 374 between Cedar Falls and Ash Cave

Situated on the same hilly terrain with essentially the same vegetation and animal life as at Hocking Hills State Park, this area receives the camping overflow from the park and those who have pets (not permitted in state campgrounds). The Buckeye Trail and the Chief Leatherlips Trail follow its roadways for a few hundred feet. There is additional charm in a historical and very picturesque farmhouse, 125 years old, which serves as an office, museum, and the manager's home.

Hiking into the deep ravines, hayrides off the main roads, a farm pond, a little church and very old cemetery adjacent to the property provide numerous educational possibilities. The management arranges for group barbecuing if desired.

Don L. Davis
Route 1
Logan 43138
(614) 385-5582

Roger Lytle
Route 2
South Bloomingville 43152
(614) 385-6368

HOLMES COUNTY

CHERRY RIDGE FARM

135 acres

2 miles west of Sugarcreek on Cherry Ridge Rd. off SR 39

This farm consists of rolling, fertile land. It is noted throughout the area for its early contribution to the conservation movement. The owner and his father were instrumental in establishing the Holmes County Soil and Water Conservation District in 1947. Contour strip farming, improved pasture, woodland of mixed hardwoods with abundant wildlife, and a livestock program are items of interest.

The property is a part of an area called "Little Switzerland" typified by high hills 1,280 feet above sea level, and low elevations at 900 feet. Though a Swiss himself, the owner claims kinship with the large Amish population of the area. Two added highlights are the Swiss bells worn by the cows and a house full of intriguing antiques. Groups are invited to visit in the spring, summer, and early fall months.

Frank Shutt
Box 319
Route 1
Sugarcreek 44681
(216) 852-2142

SPRING WALK FARM

283 acres

3½ miles northeast of Nashville, right off SR 514 on Twp. Rd. 362

Recognized as a good dairy farm, Spring Walk may be observed also for the use of conservation practices. The farm, located on the hilly end moraine of the Wisconsinan glacier, is laid out in strips for contour farming. A farm pond provides water habitat with a vegetation border and wildlife plantings. A large woodland of mixed hardwoods and some pine plantations have typical wildflowers and small animal life. Owner welcomes field trips anytime but August and will furnish guide service if plans are made in advance.

Spring Walk Farm
Big Prairie 44611
(216) 378-2273

TROYER'S HOLLOW

60 acres

On Twp. Rd. 92 off SR 557 south of SR 39, east of Millersburg

A special treat is in store for classes which find this restored scenic valley. Situated in the heart of the county's "Little Switzerland" area, the hollow makes an intriguing geologic study. Doughty Creek, because of a stream reversal following the blocking of the valley by a glacial end moraine, has cut a deep gorge through the Pennsylvanian age rock strata for a distance of about two miles.

The campgrounds were formerly the site of Troyer's Mill and other pioneer operations. The bridge across the creek was washed out in the 1935 flood and never replaced, cutting off the township road and thus allowing a feeling of remoteness from a busy world. The property is all woodland except the flood plain along the creek; the trees in the cool, lower level are primarily hemlock. A small spring-fed pond bordered partially by the wispy hemlocks, the streams, the rock layers, some of which form overhangs, the singing birds, and the seclusion all contribute to making this a delightful study area.

This is an excellent site for a field trip or an overnight camping study program.

Ora Oswald
Route 4
Millersburg 44654
(216) 893-2172

WHISPERING HILLS

230 acres

3 miles south of Shreve on SR 514

Winds moving through the trees at Hemlock Gorge and other scenic parts of this extensive recreation area make its name quite appropriate. Cool, deep ravines cut through upper Mississippian age sandstones and shales are heavily wooded with hemlock and some hardwoods. The hemlocks are known as glacial relict vegetation, meaning that they were northern trees seeded ahead of the glacier as it advanced south. These trees as well as Canadian yew, wintergreen, trailing arbutus, and partridgeberry have persisted in these valleys because the microclimate is similar to their original far-northern habitat.

The steep-walled gorge is the result of stream reversal as the glacier blocked the normal stream flow, forcing the great volumes of impounded waters to cascade over the lowest point and cut through the rock strata to form the narrow ravine.

Campsites are available, hiking trails, a large lake, and a frog pond provide more habitats for study. Sincere efforts are being made to maintain the area in its state of natural beauty.

Whispering Hills Recreation, Inc.
P.O. Box 907
Shreve 44676
(216) 567-2137

HURON COUNTY

BELLEVUE RESERVOIR

9 acres

On Monroe St., Bellevue

A small park has been developed at this reservoir, one of five supplying the city water. A project of the Bellevue Kiwanis Club, the area has new facilities for picnicking. The city lies on the glaciated, rather smooth Lake Plain, on the broken beach ridges of old Lake Maumee. It has a thin coating of glacial drift above the Columbus limestone of Devonian age.

The area is famous for the great number of sinkholes in which the surface water drains to underground channels which emerge at lower levels, probably in the Blue Hole and other springs of the Catalpa prairie. The plot contains mixed hardwood trees and some typical of wetlands. Birds, wildflowers, and small mammals may be seen.

Manager
Bellevue Reservoir #
City Building, Bellevue 44811
(419) 483-4433

CAMP CONGER

30 acres

On Walnut Rd. 2½ miles southwest of North Fairfield

Situated on the flood plain and banks of the east branch of the Huron River this camp was one of the earliest in the state. The main entrance is at the Lewis Conger residence, the camp is part of this farm property. The area lies near the edge of the Defiance moraine on sandstones and shales of Mississippian age. About a third of the campsite is wooded with a wide variety of species, many of them labelled. A 2½-acre lake was constructed in a ravine above the camp, but the river itself is a better resource for studying aquatic animals and plants. On the west side of the river is a cutbank showing the glacial drift deposits. Bedrock exposures are evident in the river farther north.

There is a dining hall with fireplaces and six cabins.

County Extension Agent 4-H
Court House
Norwalk 44857
(419) 668-8219

CAMP SINGING RIVER

96 acres

On Walnut Rd., North Fairfield

Many wildflowers, including some of the prairie species such as bottle or closed gentian, may be found here. The habitats include grassland, creek and river bank, limestone, and woodland. A great variety of trees such as willow, sycamore, ash, walnut, beech, maples, oaks, tulip, sassafras, dogwood and paw-paw reflect the diversity of environment. Several stalwart oaks boast noteworthy longevity.

The camp lies near the crest of the Defiance moraine and only a short distance from the Norwalk esker ridge. Sandstone and shale of Mississippian age are exposed in the river bed. The glacial deposits include large erratics and numerous small igneous granites brought from the Canadian Shield by the glacier. Birds of edge-of-forest and field are seen, including the prized bluebird.

A large lodge partially winterized and tent units constitute the living facilities. Hiking trails extend to Camp Conger just south of the property.

Use of the property for the day or overnight requires permission for non-Scout affiliated groups. The fee for its use is determined by the facilities reserved.

Camp Registrar
Erie Shores Girl Scout Council, Inc.
4280 North Ridge Road, Elyria 44035
(216) 324-6104 - Elyria Office
(216) 233-6112 - Lorain Office

CAMP TODMECA

297 acres

On Peru Center Rd. 8 miles south of Monroeville

In a day when camps tend to develop more and more comfort and conveniences, this camp maintains a sense of retreat and oneness with the natural environment. In living and cooking out of doors, sleeping in covered wagons and tepees with no electricity, simplicity is achieved.

The environment is rich in natural features. The west branch of the Huron River, shallow above the dam at Monroeville, wanders through the property. A two-acre pond provides additional habitat for the study of aquatic plants and animals. Much of the site is wooded with flood plain vegetation as well as maple, beech, and oak in upland areas. An old orchard is another interesting habitat.

A very old farmhouse on the property was built of wood and bricks made in the area by a West Virginian settler who walked all the way to the site of his new home. A food service center, shower house, and barn for storage are the extent of "conveniences" maintained. Hiking trails and canoes give access to all wooded parts of the property.

Families wishing to explore the natural history will find tents and trailer sites available.

Rev. Harold Black
Box 88, Amazon 44823
(419) 634-3641

FRENCH PROPERTY

230 acres

On SR 303, 2½ miles east of SR 60

A real effort has been made by the owners of this farm to preserve some woodland, "green islands" among the cultivated fields of the area. Five woodlots varying in size from

three to eight acres have not been pastured for 40 years, permitting new growth and an understory to develop. The predominant trees are sugar maple with typical trees and shrubs in association. Natural forest succession is demonstrated by volunteer maples invading a small planting of pines. A small tributary of the Vermilion River runs through the property. The stream-dissected glacial plain is unusually scenic for this part of Ohio.

The farm is a used farm visited by vocational agriculture classes from time to time. Field trips to observe the farm or the wooded areas may be arranged by responsible persons.

The owners have recently purchased 263 acres in the southern part of Fairfield Township, Huron County. The timber has been cut over, but they plan to leave considerable acreage to reforest itself.

Winthrop and Robert French
Route 3, Wakeman 44889
(216) 839-5654

HOLTHOUSE CELERY FARM

150 acres

On SR 103, 2 miles south of Willard

This neat Dutch farmstead with its greenhouses and long rows of green celery marching through broad black muck fields is one of several enterprises begun by 21 immigrant families in the late 1890s. Those farmers were responsible for the early drainage of some 1,500 acres or more of organically rich but soggy land which was a former glacial lake bed. Although they struggled to control floods in rainy seasons and droughts in dry times, it was not until the Celeryville Conservancy District was formed in 1953 and a large upground reservoir was constructed that farmers were assured that their crops could be saved despite capricious weather.

Salad crops or truck garden vegetables are produced on the farm in great quantities. The trick is to pick, sort, weigh, package, and ship to Chicago, Boston, Baltimore, Philadelphia, or Cleveland as rapidly as possible. Modern machinery as well as improved water controls have increased production without reducing the labor force, composed of high school and college students primarily.

This farm affords an excellent opportunity to study the total agricultural process.

Jordan Holthouse
Route 2, Willard 44890
(419) 935-0151

MUCK BRANCH, OHIO AGRICULTURAL RESEARCH AND DEVELOPMENT CENTER (OARDC)

15 acres

On SR 103 south of Celeryville

This center, which is in the heart of the Celeryville farm muck land, has been established to carry on research in fields and greenhouse with varieties of vegetables to determine the best seed and method of production suited to the particular soil and climate. Researchers test disease-resistant features, effects of various herbicides, and other relevant factors. A Dutchman like his neighbors, the manager provides answers to many puzzling questions about the muck land and the vegetable growing process.

The 75-acre upground reservoir used to store water in time of plenty and to release it during droughts is near the research station. A field trip to the reservoir, the station and the Holthouse farm will give a comprehensive picture of the area and its problems.

Manager
Muck Branch, OARDC
Route 2, Willard 44890
(419) 935-1201

WILLARD MARSH STATE WILDLIFE AREA

2,676 acres

Off SR 103, at Celeryville

This property lies in an old glacial lake bed, the waters impounded by the Defiance moraine on the north and the Wabash on the south. It is a portion of one of the most extensive peat bogs in the state. Peat depth ranges to 20 feet.

Several unique plant species typical of northern bogs may be observed, as well as deer, fox, squirrel, muskrat, mink, and rabbit. Most of the property has been burned over and aspen has come in following the bog fires.

Division of Wildlife District 2 Office
952 Lima Avenue, Findlay 45840
(419) 422-6757

JACKSON COUNTY

BUCKEYE FURNACE

On SR 124, 10 miles east of Jackson

One of several sites known to have furnaces for smelting ore in the early days of Ohio, this one is being reconstructed by the Ohio Historical Society. The source of iron

was a narrow formation lying on top of the Vanport limestone of Pennsylvanian age. The site contains rock exposures and many species of trees all about the same age due to the program of cutting to make charcoal for smelting the iron. Several species of oak, hickory, walnut, ash, maple, and tulip predominate.

The area is being developed, with a general store and picnic area now available.

The Ohio Historical Society
Columbus 43211
(614) 466-4663

CAMP CANTER'S CAVE

59 acres

On US 35, 7 miles northwest of Jackson

This camp is situated in one of Ohio's more botanically rich areas and is one of the state's most scenic and interesting geologic sites. The region is in the highly dissected Allegheny Plateau where the basal formation of Pennsylvanian age known as the Sharon conglomerate is exposed by erosional forces. The "cave" is actually an overhang where a portion of this formation, being more resistant at the top and less so below, has weathered and been eroded to form the scenic features.

Three caves are on the property, each picturesque with its towering rock cliffs, abundant ferns, yellow birch, hemlock, and other glacial relict vegetation which has persisted in the cool moist ravines. On the drier hillsides are the magnolias, migrants from the south. One, commonly called bigleaf, is found only in Jackson County in Ohio. Large tuliptree, bigleaf, oaks, maples, walnut, and hickory are in the woodland association.

The camp has a partially winterized lodge and cabins. Field trips and school camping may be negotiated.

Manager
Camp Canter's Cave
Court House, Jackson 45640
(614) 286-5044

COOPER HOLLOW STATE WILDLIFE AREA

4,140 acres

On US 35, 11 miles southeast of Jackson

A widely varied ecological situation exists in this southeastern Ohio area. The site lies in the highly dissected Allegheny Plateau region underlain by Pennsylvanian age sandstones, shales, coal, and limestone. Part of the territory is in a divided watershed between Symmes Creek and Raccoon Creek, with the upland covered by oak-hickory woodlands and fields in natural succession. In the bottomlands, pin oak, red maple, river birch, and sycamore forest predominate. Alder and buttonbush swamps are present. "Hung" valleys with poor drainage resulting in sedge meadows provide an unusual study area.

Beaver, muskrat, wood duck, woodcock, and numerous species of amphibians and reptiles are found in the water and swamp habitat; deer, squirrel, grouse, raccoon, opossum, skunk, woodchuck, bobwhite, and rabbit are all common in the uplands. Songbirds and wildflowers occur in abundance and diversity in abandoned orchards, fields, and woodland. Conservation practices pertaining to soil, water, and wildlife may be observed.

Area Manager
Cooper Hollow State Wildlife Area
Route 1, Oak Hill 45656
(614) 682-4383

LEO PETROGLYPH STATE MEMORIAL

12 acres

Off US 35 northwest of Jackson

A large Sharon conglomerate outcrop provided the surface for a collection of prehistoric carvings near the little village of Leo. It is believed that these were made by late Fort Ancient Indians. They are similar in some ways to the

pictographs on Inscription Rock at Kelleys Island in Lake Erie, which are thought to have been made by the prehistoric Erie Indians. Crude pictures and symbols carved in stone were one means by which Indians left their mark. Many of the objects are recognizable—birds, fish, a mammal which is probably a bear, human feet, and animal tracks. Messages on the rock have so far escaped translation.

The pictographs are found in a rich ecologic environment: large mixed oaks and associated species, ferns, mosses, and other plants which persist in a cool, moist environment. Beyond the overhang and inscription rocks, trails lead to this natural area.

The Ohio Historical Society
Columbus 43211
(614) 466-4663

LIBERTY STATE WILDLIFE AREA

145 acres

Off US 35, northwest of Jackson near county line

This area is in Liberty Township, one of the most geologically and botanically rich townships in the state. It lies in the highly dissected Allegheny Plateau underlain by shale and the resistant Sharon formation, a conglomerate which marks the beginning of the Pennsylvanian age of bedrock.

The area supports a rich, diffuse bottomland flora where wild sunflowers are common. Liberty Township is also the northern limit of bigleaf and umbrella magnolia and these are found on the hillsides. Deer, grouse, squirrel and woodcock are the principal animal species.

Division of Wildlife District 4 Office
360 East State Street, Athens 45701
(614) 593-6933

RICHLAND FURNACE STATE FOREST

2,343 acres

On SR 327, 4 miles west of Wellston

This forest was established in 1948, primarily for timber production and public hunting for rabbit, squirrel, grouse, and deer. It lies below the glacial boundary in the Pigeon Creek watershed, affected indirectly by glaciation. The streams have cut through the resistant Sharon conglomerate, the basal stratum in the Pennsylvanian age rocks, making steep ravines and hilly terrain. The forest type is oak-hickory, containing tulip, basswood and beech as well. The property is undeveloped, but hiking in spring, summer, and fall is worthwhile.

Division of Forestry
District 5 Office
345 Allen Avenue, Chillicothe 45602
(614) 774-1596

JEFFERSON COUNTY

AUSTIN LAKE

1,700 acres

On SR 152, 5 miles north of Richmond

Opened in 1945, this privately owned park lies in a beautiful, unspoiled valley. The site is reported to be mostly woodland with some virgin timber, a mixed oak forest with many species in the association. Wildflowers are abundant, and many beaver dams, huts, and bank dens may be observed on the streams and ponds. A 130-acre lake, spring and stream fed, is used for recreation. Great pride is taken in the preservation of the natural beauty and wildlife.

Glenn C. Cable
Route 1, Toronto 43964
(614) 544-5568

BRUSH CREEK STATE WILDLIFE AREA

2,550 acres

Off SR 164 and Co. Rd. 55, east of Monroeville

The topography of this area is typical of the deeply dissected Allegheny Plateau, with steep slopes and long narrow ridgetops. The region is unglaciated and the underlying rocks are sandstones, shales, coal, and limestone of Pennsylvanian age. Soils are acid but well drained. Oak-hickory forest types dominate the ridgetops and drier slopes. Elm-ash-cottonwood and beech-maple forest stands are prevalent on the lower slopes and along the streams. Spring wildflowers are abundant. Animal populations include deer, quail and grouse, nesting woodcock, and small numbers of waterfowl during migration. Beaver activity may also be observed. The results of strip mining are evident, necessitating productive soil and water management practices, which may also be observed. The area has some facilities.

Area Manager
Brush Creek State Wildlife Area
Route 1, Hammondsville 43930
(216) 523-1708

FERNWOOD STATE FOREST

2,107 acres

4 miles south of Wintersville

Extremely rugged topography with high walls of Pennsylvanian age sandstone, limestone, coal, and shale and

steep spoil banks are typical of this extensive acreage. Part of the land was stripped before the 1972 Ohio Strip Mine Law was passed and reflects the problems of erosion and acid mine water drainage. This and more recently strip mined land was purchased by the state in 1960 for the purpose of reclamation. Presently there is good growth of elm, ash, oak, and maple trees with rabbit, deer, and squirrel frequently seen.

Formerly known as the Jefferson Reclamation area, this land has been reforested with white and red pine, European black alder and tulip, and developed for recreational purposes: campsites, hiking trails, trap shooting area, and an educational trail. All facilities are available on a first-come, first-served basis.

Fernwood also serves as a public hunting and fishing area. The Division of Wildlife has stocked deer and pheasants. All lakes have been stocked with largemouth bass and redear sunfish. Beavers are in abundance and can be seen often. Further development is being contemplated at this time. Fernwood is also unit headquarters for the Harrison Reclamation Area.

Forest Ranger
Fernwood State Forest
Route 1, Bloomingdale 43910
(614) 264-5671

FRIENDSHIP PARK

1,150 acres

Off SR 151 north of Smithfield

This large acreage is now virtually fully developed into a multipurpose recreation park. The land was primarily denuded strip mine land when given to the Jefferson County Commissioners by Consol's Hanna Division. Dedicated in the spring of 1973, this area amply demonstrates that strip mined land need not be waste land.

The area lies beyond the boundary of glaciation in the upper Pennsylvanian series along McIntyre Creek. Three coal layers, the Waynesburg at the top, the Pittsburgh 200 feet below, and the Uniontown which lies between, were reason enough for the extensive stripping operation.

McIntyre Creek has been dammed to form a 90-acre lake. Campsites and picnic areas have been developed. Reforestation and crown vetch and grass plantings are curbing erosion and providing habitat for wildlife. The residents of Jefferson County are justifiably proud of Friendship Park.

Jefferson County Commissioners
County Court House, Steubenville 43952
(614) 283-4111

G.K.L. WILDLIFE AREA

500 acres

In Cross Creek Township

One hundred acres of this property have been stripped for the removal of coal. This process has made the Pennsylvanian age rock formation accessible for study. There are also lakes which were created by the stripping process and by spoil slides which dammed the natural creek. The remaining land contains open fields and forests with trees and flowers native to eastern Ohio. These are in the mixed oak forest type, with a predominance of hickory and walnut.

Animals are abundant and there is evidence of deer. Beaver have moved into the area in the last few years, and although they are not numerous, the signs of habitation are not hard to find.

Permission for use will be granted except during hunting season or on days when the rifle or trap range is being used.

Andrew Hammack, Secretary
G.K.L. Wildlife Association
136 Sycamore Street, Mingo Junction 43938
(614) 282-9978

JEFFERSON LAKE STATE PARK

933 acres

On SR 43 west of Richmond

High hills with deep ravines and woodland surrounding a small lake make this park seem remote from civilization. The near-virgin oak-hickory forest and abundance of wildflowers and small mammals provide an excellent site for nature study. The lake is of special interest for its many unusual plants; marshes have rich flora, and the rare four-toed salamander has been found there.

Park Manager
Jefferson Lake State Park
Route 1, Richmond 43944
(614) 765-4459

KNOX COUNTY

BRINKHAVEN ACCESS

36 acres

On SR 62 at Brinkhaven

The old mill dam provides boat launching access to the Mohican River. Brinkhaven lies just east of the Illinoian glacial boundary in the flood plain created by glacial meltwater of much greater volume than the present river. Flowing south, the Mohican is typical of the glacial meltwater rivers once fed by the Wisconsinan glacier as it wasted back to the north. Rock outcrops in the banks are the sandstones and shales of late Mississippian age. Flood plain vegetation may be observed.

Division of Wildlife District 1 Office
1500 Dublin Road, Columbus 43212
(614) 466-3337

CAMP ANDERSON

205 acres

North of SR 3, 5 miles west of Mt. Vernon

A wide variety of habitats are found on the rolling fields and woodland of this property. Two ponds and small streams give ample study area for aquatic plants and animals. Both the Wisconsinan and Illinoian glaciers passed over the property, leaving varying thickness of glacial drift. It is underlain by fossiliferous sandstones and shales of the Mississippian period, exposures of which may be found in and near the streams.

The wooded areas are rich in tree species of the beech-maple association, as well as hickory, walnut, poplar, locust, wild cherry, oak, and dogwood. Wildflowers, birds, deer, and small animals are also present. Facilities include a lodge, barbecue pit, and hiking trails.

Manager, Camp Anderson
First Christian Church
110 East Vine Street, Mt. Vernon 43050
(614) 392-3706

CAMP NELSON DODD

1,100 acres

Off US 62 near Brinkhaven

This camp is in a scenic area just beyond the boundary of Illinoian glaciation. Its topography is influenced by the fact that it is in the highly dissected Allegheny Plateau and bordered by the Mohican River. The underlying rocks are Mississippian age sandstones and shales of the Logan formation, with the famous Black Hand formation not far below the valley floor. The residual soils are thin and acid. Much of the site is covered with near-virgin timber of the mixed oak forest type. Wildflowers, birds, and small mammals are plentiful.

The camp is being used presently for YMCA resident camping and by schools for outdoor education, but further development is required for year-round use. The camp is presently open from April through November 15. Field trips may be arranged also.

Manager
Camp Nelson Dodd
YMCA, 470 West Church Street, Newark 43055
(614) 345-6681

DANVILLE CONSERVATION FARM

280 acres

2½ miles east of Danville

A five-year wildlife farm management program is being conducted on this property. Of special interest is a 3½-mile trail system, known as the "Walter Lauffer Trail," which covers habitats ranging from cropland and open field to climax forest. Wildlife management and farming practices may be observed from this trail. Many songbirds, ruffed grouse, and white-tailed deer may be seen, also.

The Central Ohio Anglers and Hunters Club would welcome a cooperative research program with advanced students. Field trips may be arranged by registration 30 days in advance. The months most desirable are April, May, June, September, and October. Arrangements for primitive camping for students in the upper grades can be made upon special request. There is an open shelter house on the site.

Herb Rumfield
330 Westwood Drive, Route 1, Galloway 43119
(614) 879-8188

EDUCATIONAL PARK EXTENSION

63 acres

On SR 586, 2 miles southeast of Mt. Vernon

The Mt. Vernon city schools acquired this property for development as an outdoor education extension laboratory. The land lies on the dissected glaciated Allegheny Plateau, on a hill overlooking the Kokosing River flood plain. This is a typical glacial stream valley near the edge of the Wisconsinan glacial boundary, too big now for the stream within it. The glacial deposits of varying thickness are underlain by the shaly sandstones and siliceous shales of the Mississippian period. Transported glacial igneous and metamorphic rocks are easily found.

The property boasts more than 30 species of trees in the mixed hardwood forest type and a wide variety of birds, shrubs, and ground cover.

Manager
Educational Park Extension
West Chestnut Street, Mt. Vernon 43050
(614) 397-7422

KNOX LAKE STATE WILDLIFE AREA
760 acres

On SR 95, 1 mile northeast of Fredericktown

A small dam on a branch of the Kokosing River was built to form a large lake. It lies in rolling country underlain with thick glacial deposits. However, occasional outcrops of the Mississippian sandstones and shales are visible.

The lake is well stocked with a variety of fish. The upper third of the basin contains deciduous trees and provides maximum wildlife cover. Heron nests can be observed on these trees in mid-lake. The banks around the lake are lined with trees also.

A small picnic area is just below the dam.

Division of Wildlife District 1 Office
1500 Dublin Road, Columbus 43212
(614) 466-3337

LAKE COUNTY

BUCKEYE TRAIL
33 miles

Begins at Headlands Beach State Park and divides into two branches at Hermitage and Prouty roads. The east branch goes to Crystal Spring via Burton and the west branch to Crystal Spring via Peninsula. The latter leaves and reenters Lake County several times enroute to Mayfield

The trail traverses a series of glacial beaches as it crosses the county. It also passes through several publicly owned parks and nature preserves, including Headlands Beach State Park, Holden Arboretum, Mentor Marsh, and areas of the Lake County Metropolitan Park District. (See descriptions following.)

For maps, a new detailed guide, and further information contact:

Buckeye Trail Association, Inc.
P.O. Box 254, Worthington 43085

CAMP LEJNAR
432 acres

On Kniffen Rd. in Leroy Township

This Girl Scout camp, available for use by school groups, is in a remote part of the county in the Upper Paine Creek Watershed. Mixed hardwood forest, streams, and meadow provide a variety of habitats for study. Permission may be obtained for day hikes and the use of shelter. Winterized buildings which provide sleeping quarters for 48, and cooking facilities may be rented during the week during school months for a reasonable amount.

Camping Director
Lake Erie Girl Scout Camp
1001 Huron Road, Cleveland 44115
(216) 241-3180

CAMP STIGWANDISH
350 acres

In Madison Township

The northeastern Ohio Boy Scout Council, like many others in the state, had the foresight a number of years ago to acquire several farms to form a Scout reservation. The acquired acreage is mostly woodland and a sustained-yield forestry program is practiced on a part of it. The natural area has some beech-maple climax forest; in addition there are over 60 varieties of trees and shrubs, many native wildflowers, and all wildlife indigenous to the area.

Mill Creek (one of many so named in Ohio), a tributary of the Grand River, runs through the property cutting through the Devonian shales to make scenic topography. Fossils are reportedly there for the finding.

Three man-made lakes, a pond, and a natural bog are additional aquatic and water-related habitats. One lake provides the water supply for the camp.

Fifteen miles of excellent hiking trails give access to all parts of the reservation.

A large lodge is on the premises but it is not winterized.

Camp Director
Camp Stigwandish
1497 Ross Road, Madison 44057
(216) 298-3922

CAMP RUTH WEIGAND
295 acres

On Carter Rd. in Leroy Township

This Girl Scout property has a great variety of trees, wildflowers, small animals, and nonpoisonous reptiles. In addition to the mixed hardwood forested area, open fields in natural succession are available for study. Paine Creek, a tributary of the Chagrin River, runs through the property. It has formed ravines in the Ohio shale of Devonian age making the typical rounded hills and cliffs. Trails have been developed through the area.

Shelters and two heated cabins with limited facilities may be reserved by nature study classes during the week in the fall, winter, and spring.

Camp Director
Lake Erie Girl Scout Camp
1001 Huron Road, Cleveland 44115
(216) 241-3180

CEDAR HILLS CAMP AND CONFERENCE CENTER
160 acres

At Vrooman Rd. and I-90

Extensive woodland and rugged topography characterize this desirable camp site. Two lakes provide habitat for aquatic plant and animal life. The area is near the Paine Creek valley, which is deep and narrow, cutting through the Ohio shale to form the scenic terrain. The forest type is mixed hardwoods of oak, beech, tulip, and sometimes hickory, with hemlock and other glacial relict plants growing on the north-facing slopes. Trails have been developed which give access to the study of the forest as well as the understory wildflowers and animal life.

Facilities include a winterized lodge, with sleeping area for 39 persons, and four cabins housing 24 persons.

Rev. William S. Brown
Episcopal Diocese of Ohio
2230 Euclid Avenue, Cleveland 44125
(216) 771-4815

HEADLANDS BEACH STATE PARK
120 acres

North terminus of SR 44

This park is a small area adjacent to Mentor Marsh on Lake Erie and Grand River as it flows into the lake. The vegetation is primarily the trees and wildflowers associated with water or wet areas. Some swamp forest and marshland provide rich habitat for birds and other animals as well as the emergent plants of aquatic areas.

Park Manager
Headlands Beach State Park
9601 Headlands Road, Mentor 44060
(216) 257-1330

THE HOLDEN ARBORETUM
2,100 acres

In Kirtland Township on Sperry Rd., north of SR 6

From spring's awakening to winter's hibernation, Holden's extensive acres give unparalleled delight. Truly a tree museum, the arboretum is a repository for 5,000 different kinds of cultivated woody plants. The beech-maple climax forest predominates in the natural areas. In the autumn, the maples, oaks, sassafras, sour-gum, dogwood, and beech are ablaze with the reds, yellows, and browns of the changing season. Flowering trees and shrubs bloom in the spring, among them ornamental fruits and fragrant lilacs.

Many scenic nature trails have been developed through the arboretum, particularly over, around, and along the East Branch of the Chagrin River, by 14 lakes and ponds, through innumerable ravines and to spectacular Stebbins Gulch. Here, resistant sandstone forms a precipitous cliff which overlies the easily eroded Ohio shale of Devonian age. A nature preserve protects numerous birds, nesting and in migration, as well as deer, fox and other small mammals.

School classes and youth groups may arrange for free guided tours. Special nature courses, bird walks, flower and plant identification courses, and instruction on pruning and soil improvement are offered.

The arboretum is open daily except Mondays from 10 a.m. until 7 p.m., April through October; until 4 p.m. during the other months. The admission for nonmembers 16 or over is 75 cents, and 25 cents for children six through 15.

For a more detailed description of Holden areas designated as National Natural Landmarks, see the Nature Preserve section of this book.

Director
The Holden Arboretum
Sperry Road, Mentor 44060
(216) 946-4400

LAKE COUNTY METROPOLITAN PARK DISTRICT

Created in 1958, this park district is the only Lake County agency whose sole purpose is the preservation of natural areas. Park lands are divided into five reservations and comprise a total of 3,200 acres. Eight parks have been developed covering 1,600 acres, primarily along Lake County watercourses, with most of the land heavily wooded.

For information, subscriptions to the bimonthly newsletter, or to make reservations for field trips or illustrated programs, contact:

Lake County Metropolitan Park District
1385 West Jackson Street, Painesville 44077
(216) 352-9568
951-4414

CHAPIN FOREST RESERVATION

362 acres

In Kirtland Township between SR 306 and Hobart Rd.

This highly diverse area is one of the best parks in which to study the effects of topography on living communities. Plant associations include red maple-elm swamp forest, mixed oak forest, and beech-maple forest. Parts of the park, seen from afar, rise above the surrounding countryside. The sandstone hills represent remnants of a large river delta deposited during the Mississippian period, subsequently uplifted, and eroded to its present topography. The highest is known locally as Gildersleeve Knob. The Berea sandstone of the Mississippian and the Sharon conglomerate ledges of the Pennsylvanian periods provide excellent habitats for ferns, lichen, and moss.

As a result of the July 1969 storm, many trees of large size were blown down and have since been removed. The openings created by the storm are of interest to students of plant and animal succession.

GIRDLED ROAD RESERVATION

745 acres

In Concord Township between Girdled and Radcliffe roads

This undeveloped area lies along Big Creek and is largely forested. A portion of the Buckeye Trail crosses this park.

GRAND RIVER RESERVATION

Hidden Valley Park

110 acres

Off SR 528 south of Madison, on the Grand River

An unspoiled tract of valley and ridge has been added to the small recreation area of this park. The north-facing slopes have a mixed hardwood association of maple, beech, and hemlock, the latter typical of woodlands in the north.

Hogback Ridge Park

185 acres

In Madison Township on the south side of Grand River, east of SR 528

An excellent area for ecological study, this park contains a steep ridge or hogback which lies between the flood plain of the Grand River and Mill Creek, and from which the area derives its name. The north-facing slopes are typical of Ohio's north woods environment, with hemlock, white pine, roundleaf dogwood, and buffalo-berry. The streams have eroded through the Chagrin shale and the glacial end moraine, forming cliffs and ravines. Good hiking trails provide access to waterfalls and excellent wildflower areas. This is the site of Fort Madison and an Erie Indian village.

Indian Point Park

76 acres

Seely Rd. in Leroy Township, on the Grand River

Indian Point is historically significant as the site of an Erie Indian village and fort. The earthworks remain in good condition. It also affords a spectacular view of the Grand River and Paine Creek from a high flat-topped point between the two moraines deposited by the glacier. The streams have cut through the Chagrin shale and the glacial deposits to form steep slopes and flood plain topography.

Essentially virgin remnants of the Portage escarpment mixed forest type remain on the north-facing slopes. This is the red oak, beech, and hemlock association. Lowlands are frequently flooded in winter.

Riverview Park

45 acres

Across from Hidden Valley Park along the Grand River

This is a small picnic area overlooking the Grand River. Although it is limited as a wildlife study area, the stream erosional and depositional features and valley profile may be observed.

Wyman (Helen Hazen) Park

60 acres

On SR 86, south of Painesville

This park lies mainly in the flood plain of Grand River and its tributary, Big Creek. A study of the dense flood plain forest, wildflowers, and the stream pattern may be made on the largely undeveloped trails.

LAKE SHORE RESERVATION

Parmly Park

15 acres

On Parmly Rd. in Perry Township on Lake Erie

This wooded park contains a mixed stand of hardwoods and a wooded ravine leading to the high bank on Lake Erie's shore.

PAINE CREEK RESERVATION

Hell Hollow Park

709 acres

Leroy Center Rd. in Leroy Township

The wildest of the Lake County parks, Hell Hollow is situated in the upper Paine Creek valley. The forest is of mixed hardwoods and glacial relict vegetation on the north-facing slopes of the Portage escarpment. In the deep, narrow valley, in addition to the hemlock, Canada mayflower and yew may be found. Hiking trails lead through this area of unspoiled beauty.

WICKLIFFE HIGH SCHOOL LAND LABORATORY

90 acres

At 2255 Rockefeller Rd., Wickliffe

This school is very fortunate to have such a sizable acreage of forest, field, and marsh in its own backyard. The pond and marsh area is rich in wetland vegetation, including sedges and grasses. Muskrat, painted turtle, snapping and spotted turtles are collected, studied, and returned to their natural habitat. Deer and weasel are observed occasionally.

The variety and number of birds are outstanding, ranging from warblers to pileated woodpeckers, from nesting waterfowl to field sparrow. Trail guides may be obtained for preview and used during a field trip. Months suggested for visits are April, May, September, and October.

Director
Wickliffe High School Land Laboratory
3255 Rockefeller Road, Wickliffe 44092
(216) 944-0800

WILLOUGHBY-EASTLAKE LAND LABORATORY

30 acres

South of SR 84 on Shankland Rd.

Developed on this site is a trail which leads down a hillside past a natural spring into a wooded area and along a small creek. It then circles back into the woodland, offering a tremendous variety of trees, wildflowers, shrubby plants, animals, and physical features for study. A prepared brochure explaining some of the outstanding features and relationships may be obtained.

Land Laboratory Manager
Willoughby South High School
Shankland Road, Willoughby 44094
(216) 946-5000

LAWRENCE COUNTY

CLARK WOODS

53 acres

On SR 141, 1 mile north of Wilgus

In the 30 acres of woodland of mixed oak forest may be found many species of trees as well as 50 to 60 different wildflowers. Study possibilities include wildlife—deer and small mammals, pileated woodpeckers and grouse—and a stream dissecting Pennsylvanian age sandstones, limestone and coal. Months most desirable for field trips are March, April, May, September, and October.

John C. Clark
Willow Wood 45596
(614) 643-2457

DEAN STATE FOREST

1,797 acres

On SR 93, 15 miles north of Ironton, then east on SR 373

Established in 1916, this is the second state forest acquired for timber management and wildlife protection. It is in the highly dissected Allegheny Plateau, the terrain typically rugged. It is beyond the boundary of glaciation and underlain by the sandstones, limestones, coals, and iron ore layers of the early Pennsylvanian age rock formations. The Vanport limestone and the ferriferous ore associated with it have contributed much to the past wealth in Lawrence County. The forest lands on this property were cut over to make charcoal to fire the iron furnaces which operated extensively in Ohio from 1804 to 1923.

A hiking trail 5½ miles long through the hilly oak-hickory forest is recommended. A fire tower at Pilot Knob gives an excellent panoramic view of the countryside as well as an opportunity to learn methods of detecting fire, fire control, and current laws.

Forest Ranger
Dean State Forest
Route 1, Pedro 45659
(614) 532-7228

LAKE VESUVIUS RECREATION AREA

2,000 acres

1 mile east of SR 93, 7 miles north of Ironton

The area gets its name from the old iron blast furnace which stands near the dam. The Vesuvius Furnace was one of the first in the famous Hanging Rock Iron District, built in 1833 and lasting until 1906, using charcoal made from the forests of the region. The source of ore was a narrow band above the Vanport limestone of the Pennsylvanian coal series.

The area offers nature and hiking trails, swimming, picnicking, boating, fishing and camping.

District Ranger
U.S. Forest Service
710 Park Avenue, Ironton 45638
(614) 532-3223

LICKING COUNTY

BUCKEYE LAKE STATE PARK

3,307 acres

South of I-70 off SR 79, on west side of Buckeye Lake

This small park at the water's edge has little or no natural area but provides lunch facilities and a boat ramp. The lake of approximately 3,300 acres is of considerable interest historically and geologically. Before it was dammed to form a feeder lake for the Ohio Canal system, the area was known to the Indians and settlers as a part of "the great swamp." The area was formerly a lake where clays and silts were deposited when a glacier blocked normal stream flow. Even now, much of the surrounding land remains wet most of the year.

Cranberry Island (see Nature Preserve section) is a floating bog in the eastern part of Buckeye Lake. It is a section of the original bog which, in 1826, broke loose and floated to the top of the newly impounded waters of "Licking Reservoir."

Park Manager
Buckeye Lake State Park
Box 488, Millersport 43046
(614) 467-4191

CAMP AGAPE

40 acres (camp) 300 acres (adjacent)

On Co. Rd. 15 off US 62 and SR 657, 9 miles northwest of Newark

Camp Agape is situated along the Clear Fork tributary of the Licking River. This stream has dissected the glacial drift and Mississippian sandstones and shales to form a surprisingly rugged terrain. Hiking trails lead into a heavily forested area where many wildflowers and small animals may be seen. Open fields unused for years are in various stages of natural succession. The stream and a small pond provide ample aquatic habitat.

A large rustic winterized lodge contains cooking and dining facilities as well as sleeping quarters. Cabins for additional sleeping space are located near the lodge.

Lloyd D. White
495 Meadoway Park, Worthington 43085
(614) 885-6449
(614) 291-2165

CAMP FALLING ROCK

500 acres

On Co. Rd. 21 in northeast part of county

Situated along the narrow valley of Rocky Fork Creek, this camp lends itself well to a study of geology, botany, and zoology and their interrelatedness. Large slump blocks of the Black Hand sandstone outcrops have been loosened by weathering from the formation and have fallen or slid into the valley.

The woodland contains the native Ohio trees of mixed hardwoods, as well as many wildflowers and shrubs associated with the weathered soils of the Illinoian glacial till. Deer as well as raccoon and other small animals may be seen. This is also a good site for bird study. Buildings are not winterized.

Licking County Council, Boy Scouts of America
21 South 1st Street, Newark 43055
(614) 345-7275

CAMP OHIO

200 acres

8 miles east of Utica

Located in a quiet scenic valley in the northeast part of the county, the camp provides excellent opportunities for outdoor education. A swamp area contains cattails, sedges and rushes--suitable habitat for aquatic animals. The winding stream and rocky ravines cut into Mississippian shales and sandstones form cliffs and rugged terrain in places.

Woodlands contain many varieties of mixed hardwood trees and shrubs which shelter numerous varieties of wildflowers. Pine plantations of various ages have assisted in the succession from farmland to forest. A farm pond, natural springs, and drainage ditches add to the water life environment. Two marked nature trails make identification fun and easy.

Physical facilities include sleeping cabins, a large recreation hall, modern dining room, and swimming pool. Available in spring and fall only.

Manager
Camp Ohio
Route 3, Coshocton 43812
(614) 622-4722

CAMP WAKATOMIKA

256 acres

In northeast part of county off SR 586

A combination of steep, wooded hillsides, Black Hand sandstone cliffs, pine plantations, sparkling Wakatomika Creek, and flood plain meadows make this site rich as an ecological study area. Its physical features are a result of the fact that it is located in the foothills of the Appalachian Plateau along the border of the Illinoian glacier which penetrated farthest into Ohio.

The upland wood slopes contain large oak, tulip and other hardwoods which yield to glacial relict vegetation on the north-facing slopes near the creek. In addition to hemlock, large and small, the hillsides have partridgeberry and ground pine in extensive plots. Mountain laurel, orchids, marsh marigold, and many other wildflowers may be observed from the well-developed trails. Good conservation practices have included reforestation so that where once was eroded farmland, now grow large plantations of pine, locust, and aspen, the latter reported to be the best in the state. As many as 100 bird species have been counted on the property.

Two winterized lodges and sleeping cabins are available for spring and fall months.

Camp Registrar
Heart of Ohio Girl Scout Council
1215 Newark Road, Zanesville 43701
(614) 452-9428

THE DAWES ARBORETUM

350 acres in arboretum,
600 additional acres for limited use

6 miles south of Newark on SR 13

Long recognized as a valuable site for studying native and exotic tree species, the arboretum now is also a center of more varied outdoor learning. The property has an administration building with a large meeting room.

The arboretum contains 2,500 woody plants, including those in a cypress swamp, an excellent selection of North American and foreign conifers, and native trees in a natural woodland environment.

Many specimens are spectacular botanically and historically. One of these is Franklinia, a small tree first observed growing naturally in Georgia by William Bartram in the 1700s. The tree was never located again in its natural state but this cultivated specimen speaks for its ancestor. A Japanese garden, plantations of crab apple and a multitude of other woody plants may be studied.

A nature trail from which one can observe wildflowers, birds, and small stream habitats winds through the many acres of natural woodland. A log cabin in the woods may be reserved by groups. A lovely eight-acre lake has marsh vegetation at one end. One may see Mississippian sandstones and shales with fossils in some places.

A naturalist educator is available for workshops and field trips. Workshops provide instruction in birds, mammals, geology, weather, plants, and horticultural subjects.

Naturalist Educator
The Dawes Arboretum
Route 5, Newark 43055
(614) 323-2990

FLINT RIDGE STATE MEMORIAL

515 acres

2 miles north of I-70 and SR 440 on Co. Rd. 668

Flint Ridge has much of interest for a multipurpose field trip. The irregular series of hills about 10 miles in length, part of which is now the State Memorial, were mined by Indians who came from great distances to procure the flint. This high grade, colorful mineral was deposited in a quiet sea some 200 million years ago as a result of silica-saturated waters. A museum built in 1969 shows a quarry pit, demonstrates the probable method of chipping flint, explains the geology, and exhibits valuable pieces of the Ohio state gem stone.

Three nature trails and a special walkway (with braille signs) for handicapped persons provide access to the woodland and the quarry pits; they reveal many species of native Ohio trees, shrubs and wildflowers. Visitors are requested to refrain from removing pieces of flint from the park, but road cuts contain good samples.

The Ohio Historical Society
Columbus 43211
(614) 466-2915

HEBRON NATIONAL FISH HATCHERY

217 acres

One-half mile north of Buckeye Lake on Canal Rd. Use SR 37 exit from I-70

The Hebron hatchery is one of two maintained in Ohio by the federal government. The total area has about 75 acres of woods, several fields, and 40 ponds. Water for the hatchery is obtained from a nearby section of the old Ohio Canal draining from Buckeye Lake. The ponds are used for the production of bass, bluegill, redear and catfish, with over a million of these fish used to stock ponds in Ohio, Indiana, southern Michigan, and a small portion of West Virginia.

The ponds provide excellent study areas for shorebirds. The woodland is nesting and feeding territory for numerous forest and edge-of-forest species. Animals which may be seen are frogs, toads, turtles, raccoons, and snakes. Three and one-half miles of nature trails have been developed to give access to the ponds and woods.

Manager
Hebron National Fish Hatchery
Route 1, Hebron 43025
(614) 928-8092

THE OCTAGON EARTHWORKS AND MOUNDBUILDERS EARTHWORKS

66 acres

On SR 16 in west Newark and SR 79 in south Newark

These large enclosures are parts of the Newark group of Hopewell Indian earthworks situated on the west side of the city between the south fork of the Licking River and Raccoon Creek. Although the expansion of the city obliterated large portions of the earthworks, these two have been well preserved. In addition, many mixed hardwood trees are worth observation and study. A small museum, concerned primarily with prehistoric Indian art, is located at Moundbuilders State Memorial. Picnic facilities are also available at Moundbuilders.

For maps and brochures contact:

The Ohio Historical Society
Columbus 43211
(614) 466-2915

Miss Dora Rine
95 Cooper Avenue, Newark 43055
(614) 344-5096

THE PIME WOODS
(Sts. Peter and Paul Mission Seminary)

250 acres

West of SR 79 on Union Twp. Rd. 134

School classes are invited to explore the trails winding through the extensive woodland which lies behind the Saints Peter and Paul Seminary. Although partially forested 14 years ago, the woods contain many mature mixed hardwood trees and heavy underbrush. The land lies on glaciated territory underlain by Mississippian sandstones and shales. A pond and a stream meandering through the wooded area give access to studies of water life and erosional and depositional patterns of a normal stream flow.

Outdoor tables for work or eating are available near the woodland.

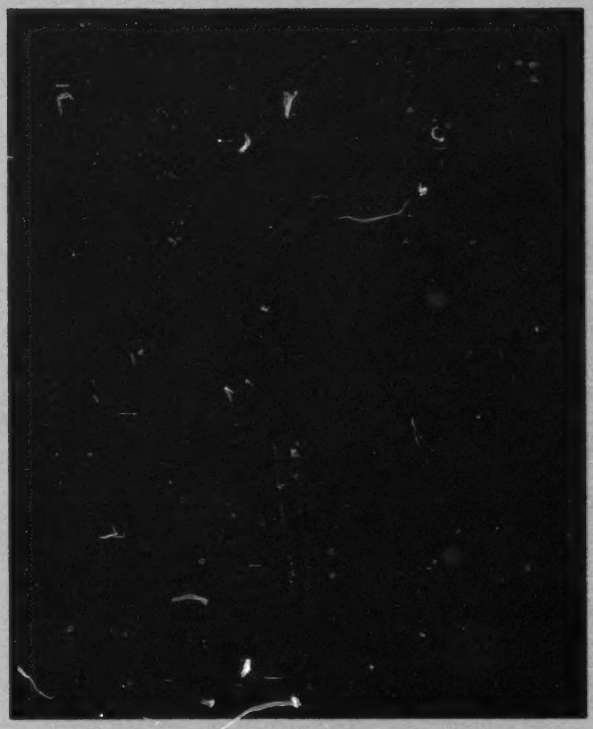
Fr. Giulio F. Mariani
Route 5, Box 189, Newark 43055
(614) 349-8000

PINECREST TREE FARMS

280 acres

In the extreme northeast part of Licking County, one-half mile north of SR 79 on Twp. Rd. 226

Acres and acres of white and red pines of considerable size, fields in succession, and a hillside of deciduous woodland on this diversified property provide a rich field study experience. The trail through the forest passes conifers of various species and ages, propagated now by natural regeneration. Exposures of Mississippian sandstones and seeping springs create microhabitats within the forest where orchids, ferns, and many spring wildflowers may be seen in



season. The mixed hardwood association includes stately tuliptrees, large maples, black cherry, and many others typical of the area. Lying just beyond the glacial line, the soils are moderately deep Muskingum soils with hillsides well adapted to tree growing. A small, picturesque log cabin, deep in the woods, is available for emergency shelter.

The gracious owners welcome well-supervised school groups on weekdays all months except January through March.

Leiton E. Nelson
Route 3, Frazeysburg 43822
(614) 745-5069

SOUTHWEST LICKING SCHOOL LAND LABORATORY

50 acres

Behind Watkins Memorial High School, on Co. Rd. 42, about 2 miles east of SR 310, north of US 40

Hiking trails wind through this sizable property used solely for outdoor education. Thirty acres are woodland, with beech-maple climax forest and many plants and animals in association. Another part is old field in natural succession with new pine plantings for reforestation. The site has an outdoor classroom in the woods, and sanitary facilities and parking are available at the school. Use is restricted to school hours.

Elaine M. Redmond
Watkins Memorial High School
Pataskala 43062
(614) 927-3846

LOGAN COUNTY

CAMP MAC-O-CHEE
413 acres

Between SR 540 and SR 47 on Co. Rd. 12, 9 miles northeast of Bellefontaine

The campsite is near the headwaters of the Mad River in the rich agricultural belt of west central Ohio. The property lies in the Bellefontaine outlier area underlain by limestones of the Devonian period which are well known for the solu tional caves in the vicinity. (See Ohio and Zane Caverns.)

Broad playing fields give a manicured aspect to the front part of the property, which contains a large lodge and swimming pool. However, the camp units are picturesquely situated in woodland and wooded ravines affording valuable nature study sites.

The area has a rich Indian heritage and gives access to an historical burial spot of Civil War importance.

All-day field study trips or small group resident camping are feasible.

Program Services Director
Buckeye Trails Girl Scout Council
184 Salem Avenue, Dayton 45406
(513) 224-7601

CAMP MYEERAH
480 acres

On SR 540, 8 miles east of Bellefontaine

This recently developed Girl Scout camp offers a wide variety of ecological units for observation on field trips, or study during a school resident camp session in spring or fall months.

It is situated on the Bellefontaine outlier, near the highest spot in Ohio, underlain with Devonian Ohio shale. The environment includes an exposed shale gulley where typical concretions may be found. One small lake gives an opportunity to observe emergent vegetation and water life. A large lake with fields on all sides gives a contrasting situation. Wooded hillsides contain native Ohio trees and a variety of wildflowers in season. Swamp areas provide habitat of yet another kind.

Local Indian history centers on Simon Kenton, Blue Jacket, and Captain Zane. A very old cemetery, reported to be the burial place of early white settlers as well as blacks who came to the area with the help of the Underground Railroad, makes a fascinating study area.

One large and one small winterized lodge, a log cabin, large barn, and platform tents constitute the living and workshop facilities.

Camp Property Manager
Apple Seed Ridge Girl Scout Council
616 South Collett Street, Lima 45805
(419) 225-4085

CAMP (ALFRED L.) WILLSON
450 acres

On Lake Rd. off SR 68 south in Bellefontaine

White oak trees 300 years old and a 40-acre glacial lake are outstanding features of this YMCA camp. The glacial lake is recognized as a "kettle hole," a lake created by a great chunk of ice left by the wasting glacier 11,000 or more years ago. Elk skeletons were discovered in it, an indication of climatic conditions following glaciation.

The camp area is largely woodland of oak-hickory association, undisturbed for many years. Wildflowers and the usual furry animals, as well as birds, are abundant. Marginal marshlands provide another type of community for study. Glacial erratics and neutral soils over Silurian dolomite rocks are typical of the area.

The camp has a large recreation hall, winterized sleeping accommodations for 200, conference rooms, and food service in a large dining hall. Boats and canoes may be used.

Camp Director
YMCA
40 West Long Street, Columbus 43215
(614) 224-1131

INDIAN LAKE STATE PARK
6,448 acres

On SR 366, 235, and US 33

This 5,800-acre lake is one of the best known and most used lakes in Ohio. It was constructed on this flat glaciated till plain as a feeder lake for the Miami-Erie Canal. The marginal land at the campsites provides some marsh areas. The forest remnants on the northwest shore contain buckeye, walnut, and swamp white oak. Old field type vegetation covers most of the area. A nature program is featured in the summer months.

Park Manager
Indian Lake State Park
Route 1, Huntsville 43324
(513) 843-2098

KIRKMONT CENTER
353 acres

Turn right on Logan Co. Rd. 152 at East Liberty sign from US 33 to Co. Rd. 10, approximately 5 miles

This delightful spot, situated on the third highest knob of the Bellefontaine area, is rich in outdoor education opportunities. Of the total acres, half are wooded. An unusual variety of trees are to be found, including large oak, beech, red elm, and three species of maple. The native wildflowers and animals are abundant.

Geologically, the property lies on the Bellefontaine outlier, a mass of Devonian age limestone and shale which was left by the erosional forces begun millions of years ago. At its highest point, it stands 1,550 feet above sea level. The limestones are not exposed on this property, but trails lead to an Ohio shale cliff on the southern edge. Here the typical dolomite concretions, the jointing and thin bedding planes and the rounded-hill erosional pattern may be studied. A small steep ravine with a waterfall cuts through the shale; from there it meanders through the Mad River terrace and flood plain to join the parent stream, which shows the profile of a glacial river.

The area contains a lake and marsh lands as well as streams for aquatic studies. Indian and pioneer history includes the French and Indian Wars and the War of 1812.

The buildings are attractive, winterized, and spacious. Groups are invited for field trips as well as camping.

Leland Duff, Resident Manager
Kirkmont Center
Zanesfield 43360
(513) 593-2141

MARMON VALLEY FARM

200 acres

1½ miles east of Zanesfield on Co. Rd. 153

Although Marmon Valley Farm was developed as a private farm camp, the owners are happy to accommodate a school class for outdoor education or field trips. The farm is in the Mad River valley, called the Marmon Valley because of the pioneer family by that name which settled at Zanesfield. In fact, the Indian and pioneer history of the valley is unusually interesting and exciting.

The river has cut through the Devonian rocks of the Bellefontaine outlier since the wasting of the last glacier. The carbonaceous Ohio shale, with its springs, concretions and characteristic jointing system, is exposed in the hillside at the edge of the property. Thirty-five different kinds of trees are reported on the site as well as wildflowers, wild animals, glacial boulders, a stream, a gully, and a pond. Hayrides, hiking, and horseback riding may be arranged. A spacious farm home, cabins, and tents provide living quarters.

Mr. and Mrs. Wm. D. Wiley
Route 1, Zanesfield 43360
(513) 592-4122
(513) 593-4101

ROLLICKING HILLS

160 acres

One-fourth mile east of DeGraff

Field trips or small school camping groups in spring or fall may be arranged at this summer farm camp. The property provides an 11-acre woodland of hardwoods, a five-acre farm lake, pine and hardwood plantations, field succession, contour-strip cropping, wildlife plantings, grass waterways, and peat bog succession for study of ecology and conservation practices. Soils are glacial till and lake deposits; the farm lies in the glacial boulder belt.

A very large homestead and a winterized garage with fireplace and modern facilities constitute the living quarters. Horses, farm animals and small craft on the lake contribute to outdoor education possibilities. The farm is operated by a conservation-oriented high school science teacher and his wife, who is a school librarian.

Mr. and Mrs. Robert Smithers
Route 2, DeGraff 43318
(513) 585-5161

VALLEY HI SKI AREA

350 acres

Off US 33 southeast of Bellefontaine

This ski area is situated on the second highest point of the Bellefontaine outlier, a mass of Devonian age rock standing above the older rocks typical of the area. The property is mostly woodland except for the cleared ski slopes. Oaks are predominant but the forest type includes maple, hickory, walnut, and many others. Wildflowers are abundant, and deer, muskrat, raccoon, and squirrel may be seen.

The Mad River flows through the property; the carbonaceous Ohio shale is exposed in ravines. Hiking trails have been developed to view the ecologic features. The area is rich in Indian lore and pioneer history.

Groups may arrange to use the winterized lodge. Motel lodging is available also.

Manager
Valley Hi
Route 3, Bellefontaine 43311
(513) 593-2811

ZANE CAVERNS

87 acres

6 miles east of Bellefontaine on SR 540

A lively ecology field trip here might have the purpose of determining the relationship of glacial soils over Devonian age shales and limestones, oak-hickory forest type with associated wildflowers and animal life, and the stream erosion features to the limestone caverns below the surface. The caverns are relatively small; the trip through is only three-eighths of a mile long. The solution pattern of the rocks, the fossils, stalactites and stalagmites, and the "bottomless" pit are quite worthwhile. There are beautiful woodland trails above ground.

Groups are advised that the most desirable time for visitation is from April through October.

Zane Caverns Company
Route 2, Bellefontaine 43311
(513) 593-3777

LORAIN COUNTY

CAMP ISS-SEE-KES
40 acres

On Vermilion Rd., between SR 2 and 113

This wooded property located near densely populated urban areas has many natural features making it advantageous. It lies on the Vermilion River, which has eroded deeply through the Berea sandstone and Devonian shales to make good geologic studies. The region is glaciated and the old beach ridges of former levels of Lake Erie may be observed.

The woods are composed of mixed hardwood trees with wildflowers displayed in season.

The camp has hiking trails, a dining lodge with cabins and tents for sleeping. The Elyria YMCA invites groups in accordance with YMCA policies to use the camp. School groups on field trips only will not be charged.

Camp Director
Camp Iss-See-Kes
YMCA, Third and Court Streets, Elyria 44035
(216) 322-4600

CLARE-MAR CAMP
Land - 220 acres Water - 75 acres

1¾ miles west of SR 58 on New London-Eastern Rd.

This recreation property has many valuable features for outdoor education. It lies on a glacial plain just north of the Defiance moraine and the divide separating the waters flowing into Lake Erie and those to the Ohio River. The beech-maple woodland on and near the large lake also contains oak, hickory, basswood, cottonwood, dogwood, and other flora native to northern Ohio. Small mammals and occasional deer, fox, and great horned owl are seen.

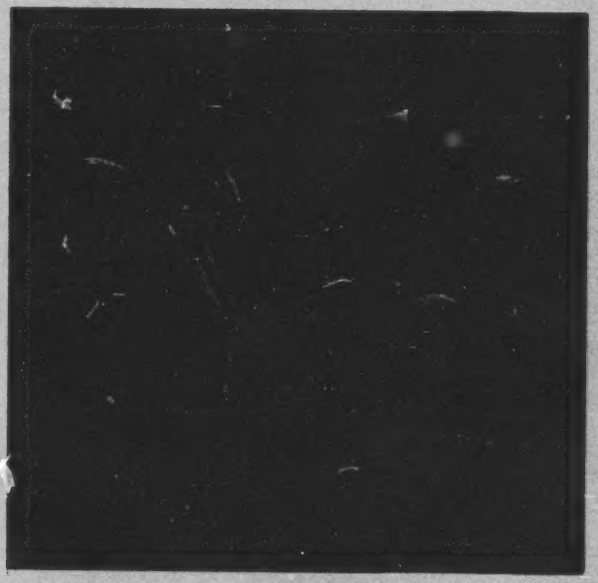
Boat rentals and hayrides may be arranged. No fee is necessary for nature study only.

Manager
Clare-Mar Camp
Route 1, New London 44851
(216) 647-3318

FINDLEY STATE PARK
931 acres

On SR 58 south of Wellington

This park is situated on a level glaciated plain with thick glacial till overlying the Mississippian age sandstone below. The Wellington Creek dam created a 93-acre lake which has a beech-maple forest and a 30-year pine plantation around



it. An excellent display of wildflowers is found seasonally in the deciduous woodland, where walnut, hickory, tulip, ash, oak, and dogwood are associated with the beech and maple. Migrating ducks, songbirds, and mammals, including deer, may be seen. An interpretive naturalist is available here during the summer months.

Park Manager
Findley State Park
Route 3, Wellington 44090
(216) 647-4490

FIRELANDS RESERVATION
300 acres

On Gore-Orphanage and Becker roads, west of Oberlin

This Boy Scout property has an exceptional number and variety of trees, flowers, and shrubs. Most of the land is wooded in the beech-maple forest type, with ash, oak, and tulip in the association. Twenty-five acres have been planted in conifers. A 20-acre pond, a small river, and a swamp give ample environment for studying aquatic plants and animals.

The property lies on glaciated land, the ice sheets leaving a variable but thin deposit. The Berea sandstone of Mississippian age outcrops in the region where the river has eroded through the formation.

There is a winterized lodge and cabins.

Firelands Area Council, Boy Scouts of America
Box 414, Sandusky 44870
(419) 625-4836

LORAIN COUNTY METROPOLITAN PARKS

Created in 1957 at the request of a large number of county groups interested in land conservation and outdoor recreation, this park district is moving forward to develop a master plan of considerable magnitude. Ten sites have been selected with a planned acreage of well over 10,000 acres. Development is well along in three park reservations and underway or being planned in three others. All six areas are available for outdoor education purposes and naturalist service is available.

Director-Secretary
Lorain County Metropolitan Park District
126 Second Street, Elyria 44035
(216) 322-7800

BLACK RIVER RESERVATION

441 acres

In the Black River valley along Ford Rd., much of the park in the northern part of the City of Elyria and the rest in Sheffield Village or Sheffield Township

The park includes flood plain and high ground areas with some wooded sections and considerable cleared land now reverting to forest, except in areas being developed for recreational use. The Black River bisects the park from north to south and an interstate highway from east to west. There are scenic shale cliffs and two deep ravines. Bur Oak Picnic Area includes lowland meadow and woodland with a picnic shelter, hiking-nature trails, and a sledding hill. High Meadow Picnic Area includes two shelters, hiking-nature trails, playground, tree nursery, some woodland, and the upper edges of ravine and river valley.

CHARLEMONT RESERVATION

452 acres

In the southwest corner of the county on New London Eastern Rd. between SR 58 and SR 511

The area is largely abandoned farm and pasture land with cut-over forest. Small streams that are headwater tributaries of the Black River and an existing pond provide aquatic environments. Most of it is now reverting to forest through natural plant succession. The farmhouse and other buildings will eventually be developed into a farm museum. Facilities and a trail system are planned for the future. It is advisable to contact the park office for information regarding developments before use of site is planned.

FRENCH CREEK RESERVATION

345 acres

In Sheffield Village between Black River, SR 611, Abbe Rd., and French Creek Rd., entrance on French Creek Rd.

The park area was formerly farmed except for rough ground along waterways. Farming was abandoned in different parts at different times, resulting in plant succession at various stages from open field to relatively mature second growth forest, plus a pine planting. Most of the area is undeveloped, although an extensive trail system exists and will be enlarged. French Creek and its tributaries have eroded deep, ravine-like valleys to provide scenic areas in the west end of the park. Included in the park are an Indian fort and village sites long known to archeologists.

INDIAN HOLLOW RESERVATION

Sheldon Woods

178 acres

Northwest of the Grafton, Sheldon Woods Unit bounded by Parsons Rd., Indian Hollow Rd., and B & O RR

This site is along the east branch of the Black River where the stream traverses Berea sandstone. It includes an abandoned quarry area with remnants of eight quarry holes, open fields now reverting to forest, meadow areas, and a sizable woods with some very large trees. Entrance from Parsons Road and construction of a trail system are underway. The quarry area is not yet accessible from the shelter.

LAKE CARLISLE RESERVATION

1,235 acres

5 miles southwest of Elyria along the west branch of Black River, reached from US 20 and SR 10 on one side and from Diagonal Rd. on the other

This area is the proposed site of a large water impoundment, but development must wait until finances are available. In the meantime a farmhouse serves as an outdoor education center and naturalist's field office. A small assembly area is available inside. The reservation is a combination of flood plain and surrounding high ground, mostly abandoned farm land. Included are a large wooded area, fields in various stages of plant succession, sections of abandoned river channel, and woodland ponds, making it an area of great interest offering a variety of habitats. Relief is relatively gentle and there seem to be no rock outcrops. Development of a system of trails and of limited facilities for such things as picnics is planned.

VERMILION RIVER RESERVATION

Mill Hollow-Bacon Woods Memorial Park

271 acres

North Ridge Rd. at Vermilion Rd., Brownhelm Township

This site is on the Vermilion River. Half of the park has been left in its natural state with the other half developed. It is mostly in the narrow valley of the river and includes considerable flood plain forest. One-hundred-foot shale cliffs make the setting a scenic one. Shelters, a nature center with exhibits and an assembly room, marked nature trails with printed trail guides, the Mill Hollow House Museum, two duck ponds, picnic areas, and a camping site are available.

WELLINGTON RESERVOIRS
400 acres

On Jones Rd., south of Wellington

Three reservoirs for water supply cover 194 acres. Charlemont Creek, a good wooded area, pine plantations ranging in age from 14 to 40 years, and fields in natural succession provide good study possibilities in the three major habitats. The woods are beech-maple forest type with many species included; wildflowers may be observed in season. The area is on glaciated, level till plain, with deposits as deep as 105 feet. The creek has typical erosional and depositional features and transported rocks.

Manager
Wellington Reservoirs
98 Johns Street, Wellington 44090
(216) 647-3927

WELLINGTON STATE WILDLIFE AREA
201 acres

On SR 58, 5 miles south of Wellington

Across from Findlay State Park, this wildlife area was the original state game farm, purchased in 1917. The artificial propagation of game birds was discontinued in 1960.

The land has been glaciated, giving it a gently rolling topography. The soils are acid and poorly drained. Two small ponds provide fishing or habitat for studying aquatic plants and animals. Pheasant, quail, and furbearing mammals are common to the area. This is a good property to observe wildlife and soil and water management practices.

Division of Wildlife District 3 Office
912 Portage Lakes Drive, Akron 44319
(216) 644-2293

LUCAS COUNTY

CRANE CREEK STATE PARK
72 acres

Off SR 2, midway between Port Clinton and Toledo

Crane Creek State Park is reached by a road running through Magee Marsh. A bird trail, where many species can be seen, extends from the parking lot through a marshy area behind the beach and picnic areas. This is an outstanding area for shorebirds and waterfowl.

There is a natural sand beach which is shaded by many large trees, mostly cottonwood. The vegetation is typical of that found in association with Lake Erie; in addition there are many grasses, with sedges in the marsh area. A new nature interpretive center and waterfowl hunting museum are open throughout the year. A full-time naturalist is available in all seasons except during waterfowl migration.

Park Manager
Crane Creek State Park
Route 3, Oak Harbor 43449
(419) 897-2524

CROSBY (GEORGE P.) PARK AND GARDENS
50 acres

At 5403 Elmer Dr., Toledo, off Reynolds Rd., one block south of US 20

Crosby Park and Gardens is under the direction of the municipal Division of Forestry and an advisory board representing numerous agencies and organizations of the City of Toledo which are developing a center for environmental education and urban conservation in the Toledo area.

This site has rolling topography with wooded areas including specimen trees, wildflowers and rhododendrons, and a natural stream. The master plan calls for a natural and cultural environment to meet the aesthetic needs of all ages and kinds of people.

Already a "Fragrance Garden," containing raised garden beds with plants with distinct fragrances and textures, has been constructed for blind and handicapped persons. Children's gardens, an ecology succession area, and a headquarters in the new Crosby Park Environmental Education Center indicate progress toward realization of the impressive master plan.

Manager
George P. Crosby Park and Gardens
618 Michigan Street, Toledo 43624
(419) 255-1500, Ext. 401

MEDUSA PORTLAND CEMENT CO. QUARRY
80 acres

Brint Rd., north of Centennial Rd., west of Toledo by way of Sylvania Ave.

Dundee limestone and dolomite make up the sloping base of this quarry, capped by the Silica formation which is composed of alternating units of shale and limestone. The lower units of the formation are highly fossiliferous, containing corals, clams, brachiopods, bryozoa, and trilobites.

Due to the extensive mining operations here, 29 layers can be seen and the quarry is a mecca for the fossil hunter.

The giant trilobite *Phacops milleri* is especially frequent, although the fossil hunter who finds one intact is fortunate. Fossil hunters from all over the world visit the quarry. Visitors are welcome on Saturday and Sunday only. A new quarry has been developed recently north of Sylvania Avenue, but due to hazardous conditions, this area is definitely off limits.

Permission to visit the old quarry must be obtained from the office on Centennial Road, south of Sylvania Avenue. It is necessary for visitors to sign liability release forms for the company. Members of Toledo Naturalists' Association will conduct guided tours upon request.

Medusa Portland Cement Company
P.O. Box 310, Sylvania 43560
(419) 841-3324

Sanctuary Chairman
Toledo Naturalists' Association
3831 Homewood Avenue, Toledo 43612
(419) 475-7012

METROPOLITAN PARKS OF THE TOLEDO AREA

The Metropolitan Park District of the Toledo area operates eight "Metroparks"—totaling over 5,200 acres—which are open daily and free of charge to the general public. Each of the eight parks boasts its own unique personality, and together they provide the outdoor enthusiast with varied scenery and a wide range of activities. The most prominent of the parks, Oak Openings—offers 3,400 acres of naturalists' paradise, 27 miles of hiking and nature trails, and 20 miles of horseback trails. Four of the parks sit astride the historic Miami and Erie Canal overlooking the Maumee River. Unless otherwise indicated, for information, reservations, and naturalist services, contact:

Metropolitan Park District of the Toledo Area
Administrative Office
911 Madison Avenue, Toledo 43624
(419) 255-1400

BEND VIEW METROPOLITAN PARK
30 acres

On US 24, 3 miles southwest of Waterville, along the Maumee River

Bend View Metropolitan Park is a narrow tract of natural area between US 24 and the Maumee River, located along the historic Miami and Erie Canal. An eight-mile hiking trail along the canal towpath connects the park area with Farnsworth Metropolitan Park, two miles downstream, and Providence Metropolitan Park, six miles upstream. The site is designated as a "hike-in" park with access from Farnsworth and Providence metropolitan parks. No parking is available.

An open shelter house and patio situated on a bluff overlooking a dramatic 90-degree bend in the river is the focal point of the area. The park is ideal for bird-watching and generally "getting away from it all."

CANAL LANDS
110 acres

Extend from Farnsworth Metropolitan Park southwest along the Maumee River to Providence Metropolitan Park

In 1932 the Toledo Metropolitan Park District negotiated a 99-year lease agreement renewable forever with the State of Ohio to operate the abandoned Miami and Erie Canal lands in Lucas County as public park land.

The canal lands which follow the Maumee River connect Providence, Bend View, and Farnsworth parks. Today an eight-mile hiking trail winds through dense bottomland vegetation where canal boats used to travel. Scattered along the route are frequent panoramic views of the Maumee River valley. Wildlife is abundant along the entire length of the historic canal towpath.

FARNSWORTH METROPOLITAN PARK
40 acres

On US 24, 1 mile southwest of Waterville along the Maumee River

This park is a long narrow belt of scenic land sloping gently from 30-foot bluffs to the Maumee River. Opportunities for activities such as picnicking, hiking, and canoeing combine with attractive wide-open views of the Maumee to make this park ideal for family outings and school field trips.

Within easy walking distance of the park, a geologic fault—a rock fracture zone known as the Bowling Green fault—can be observed in an overlooking bluff of Bass Island dolomite.

METROPOLITAN PARKS OF THE TOLEDO AREA (Cont.)

OAK OPENINGS METROPOLITAN PARK
3,400 acres

3 miles west of Toledo Express Airport off Airport Hwy. (US 20). Bounded by Airport Hwy. on the north, Wilkins Rd. and SR 295 on the east, SR 64 on the south and west

Oak Openings is a nature-lover's paradise. The site lies completely within a geologic area known as the Oak Openings, so called because of the thick sandy deposits which were the beach ridges of the ancient glacial Lake Warren, predecessor to Lake Erie. Several oak species prevail on the sandy habitats created by the extended beach ridge. The area is widely recognized as offering a larger variety of plant and animal life than any other area of comparable size in the United States. Some of the rare wildflowers found here are the queen of the prairie, blazing star, lance-leafed and bird's foot violet, mountain phlox, gentian, and many others. Within the park boundaries Ohio's only moving or "living" sand dunes are preserved.

To supplement this unique ecosystem, naturalists conduct school walks and lectures, lead Sunday afternoon walks open to the general public, and are available upon reservation to groups visiting the park. Headquarters for group activities is the lodge, a large reservable structure in the midst of the park, providing facilities for meals, daytime meetings, and dormitories for overnight groups.

Three lakes, Mallard, Evergreen and Springbrook, offer open shelters, picnicking, fishing, and ice skating in the winter season. There are 27 miles of hiking trails and 20 miles of horseback riding trails.

The trails, the large picnic areas, and abundant flora and fauna combine to present many unusual opportunities to nature study enthusiasts.

PEARSON METROPOLITAN PARK
320 acres

On SR 2, 2 miles east of the Detroit-Toledo Expressway, within the city limits of Oregon

Pearson is the most developed of the metropolitan parks of the Toledo area. Large mowed areas are ideal for picnicking, baseball, soccer, or just spreading a blanket in the warm summer sun. There are bicycle and horse trails, day camp facilities, tennis courts, and several ponds which offer year-round scenery, pedal boating in summer and ice skating in the winter months.

Three miles of walking trails through a large natural area offer a chance to observe abundant wildflowers and bird life, particularly migrating species.

Bicycles can be rented for use on the 3½-mile bicycle trail, horses are available at a stable within the park area, and Macomber Lodge is reservable for meetings and programs. Refreshments are available at the main shelter house.

PROVIDENCE METROPOLITAN PARK
Land - 40 acres Water - 260 acres

On US 24 along the Maumee River, across from Grand Rapids

Providence Metropolitan Park is rich in the history of canal days. A picturesque dam in the Maumee River built to feed water into the historic Miami and Erie Canal is a main attraction. The park itself is located in what was the old town of Providence, which thrived in the early canal days until a cholera epidemic made it a ghost town.

In the park is the Ludwig Mill, an "ole-time" feed and grain facility still in operation. The mill is currently being restored by the park district.

Hiking, excellent fishing from both the river banks and in the rapids below the dam, and picnicking are the principal park activities. Tree cover here is mainly cottonwood and sycamore.

SECOR METROPOLITAN PARK AND ARBORETUM
500 acres

On Central Ave., 8 miles west of Toledo

Secor Park is on the edge of the Oak Openings area and has plant and animal life typical of both heavy clay and light sandy soils. When the last glacier wasted back it left the northern part of the park lying under the waters of Lake Warren, an earlier phase of Lake Erie. Large amounts of clay carried in suspension by the glacial waters slowly settled on the lake bottom, as sand deposits accumulated on the shore. This sand, driven by wind and waves, was heaped up in low dunes which can still be found in the southern section of the park. The preserved woodland lies in the lower half of the tract and is characterized by magnificent specimens of tulip, oak, basswood, black gum, and

METROPOLITAN PARKS OF THE TOLEDO AREA (Cont.)

red maple towering over a dense understory of dogwood, spring wildflowers, and ferns. The area provides good habitat for birds and small furbearers. Separating the sand dunes are swamp forests of ash, cottonwood, and maple with mixed hardwoods, oak dominant, on the stabilized dunes.

The northern part has been developed into an arboretum where there are many varieties of trees and shrubs which can be grown in the Toledo area. A natural environment interpretive nature center has outstanding exhibits, two lecture halls, and a fully equipped kitchen. Four hiking trails, a bike trail, and a self-guiding nature trail allow a great variety of exploring experiences. A park naturalist is on duty the entire year. Bikes are available for rent during the summer season.

SIDE CUT METROPOLITAN PARK
120 acres

Along the Maumee River, lower parking lot on west Broadway, west of Conant St., within the City of Maumee; upper parking lot off Anthony Wayne Trail

Side Cut Metropolitan Park, which derives its name from the Maumee Side Cut Canal which is preserved in the park area, offers topography ranging from high bluffs to large flood plain areas. It was through the Side Cut that the first canal boat entered the Maumee from the Miami and Erie Canal in May 1843. Three original limestone locks and portions of a fourth are located within the park, along with a lake, picnic areas, day camping facilities, and baseball diamonds. A nature trail and several walking trails are available for use. Fishing is a popular activity in both the lake and the adjacent rapids of the Maumee River during the warmer months and ice skating in the winter season. An enclosed shelter house is reservable for meetings and programs.

SWAN CREEK METROPOLITAN PARK
412 acres

In Toledo, bounded by Airport Hwy. on north, Glendale Ave. on south, Byrne Rd. on east, and on west by Eastgate

Currently under development, Swan Creek Metropolitan Park has rolling topography and dense forests interspersed with meadows located in the midst of a highly developed portion of suburban Toledo. The area itself is one of the most untouched and primitive sections of bottomland in the Toledo area. Slopes which face all four points of the compass, plus the bottomlands of the Swan Creek flood plain contain a large variety of plant life. Tall poplars, maples, oaks, sycamores, and some nut trees dominate in the heavily wooded areas. The abundant plant life combines with the many forms of wildlife and the varied topography to make this site ideal as a metropolitan park.

A temporary visitor center at 4102 Glendale, trails, and other basic facilities are currently available. Designated picnic areas complete with open shelters and sanitary facilities are contemplated for the near future. Activities which will be available include picnicking, day camping, hiking, bicycling, nature study, and fishing.

WILDWOOD PRESERVE
460 acres

At 5120 W. Central Ave. (US 20), approximately 1½ miles east of Central Ave. exit from I-475

The property is essentially an oak forest within the oak openings sand belt. A five-acre prairie remnant and 100 acres of the Ottawa River flood plain, maturely wooded here and containing some very old trees, are among the chief attractions. The area is unique in predominately flat Lucas County in that it has quite varied topography. It contains three large ravines with ridges that are veritable mountains in this region.

This is an excellent birding area, particularly during migrations. Fox, deer, raccoon, and other mammals can also be seen. The park has about 10 miles of hiking trails.

There are no parking facilities. The park is open to walk-in traffic, and at present busses bring visitors from a nearby shopping center on weekends. Groups with their own bus transportation may make reservations for visits during the week. An outdoor education center is planned.

METZGER MARSH STATE WILDLIFE AREA
558 acres

Off SR 2, 1 mile east of Bono

Situated in the southeast corner of the county near Lake Erie, the area is about evenly divided between open water and cattail marsh. Open to the lake, the marsh is subject to fluctuating water levels. Large varieties of waterfowl and shorebirds are present during spring and fall migrations. Blanding's turtles are found; other aquatic animals are abundant. Many fish species including goldfish and fresh water drum are present. For waterfowl study the period from March 1 to December 30 is recommended.

Division of Wildlife District 2 Office
952 Lima Ave. Findlay 45840
(419) 422-6757

OTTAWA PARK
300 acres

In City of Toledo, bounded by North Cove Blvd., Toledo Terminal RR, Bancroft St., Ottawa Dr. and Upton Ave.

This is the largest of the Toledo city parks. Ten Mile Creek meanders through it, contributing to the varied terrain. This includes gently rolling hills and bottomlands. There are several wooded areas with trails, one of which is a self-guided nature trail, 1½ miles long, through the bird sanctuary area. An outdoor amphitheater offers free programs during the summer season. Tennis courts, a golf course, recreation fields, and play areas are located here.

Walden Pond is open to children for fishing. The Ottawa Park Shelter House is the location of the City of Toledo, Division of Recreation Cultural Arts Center. Activities such as oil painting, enameling, ceramics, candle crafts, and

many other interesting classes are held at this center. The shelter house is reservable except during the summer recreation program. There is an established wildflower garden in the park. A naturalist is employed by the Division of Recreation.

Commissioner
City of Toledo, Division of Recreation
2201 Ottawa Drive, Toledo 43606
(419) 475-9331

TOLEDO ZOOLOGICAL GARDENS
43 acres

On US 24 at 2700 Broadway, Toledo

A class or family safari to the Toledo Zoo is within easy reach of thousands of people. Aimless wandering and discovery can be fun and exhilarating, but advance familiarity with members of the animal kingdom to be seen is excellent preparation for greater awareness and understanding.

The Toledo Zoo boasts 4,500 animals: fishes in the largest fresh water aquarium in the United States, birds, and mammals, as well as water areas, an animal care center, a greenhouse, a Museum of Science and Natural History, a Health Science Museum, and a special children's zoo.

Wooded areas contrast with the large complex of buildings and give an opportunity to observe the vegetational life indigenous to the region.

Admission charges are reasonable.

Director
Toledo Zoological Gardens
2700 Broadway, Toledo 43609
(419) 385-5721

WOODLAWN CEMETERY
160 acres

Accessible from West Central Ave. and Auburn St., west Toledo

Long a haven for bird watchers and nature students, Woodlawn Cemetery also provides for a study of dendrology to rival that at many arboretums. In 1876 an enterprising group of men, concerned with population increase, purchased a farm northwest of the Ottawa River to establish a rural cemetery in the Toledo area. The first superintendent, under the landscape plan of a Philadelphia landscape architect, was responsible for the original extensive plantings, setting a model which was followed throughout the years, resulting in the present mature woodland with well over 100 species of woody plants.

To facilitate the study of these trees, the Toledo Naturalists Association, with the cooperation of the cemetery association, has developed a map describing a tree tour which can be made, to a large extent, by bus or car. Headstone names are used as a key to the location of various species, given in both the common and botanical name.

Birds in the trees, waterfowl on the two lakes, a boulder monument built from rocks collected by Toledo school children, and displays of tulips and geraniums in season are additional features which attract many visitors.

The cemetery personnel welcome visitors as long as the property is treated with respect and the privilege is not abused. Maps may be obtained at the office.

Manager
Woodlawn Cemetery
1540 West Central, Toledo 43606
(419) 474-8527

MADISON COUNTY

CAMP MADISON LAKE
1½ acres

Off SR 665 on Madison Lake

A very small plot has been developed on the lake shore by Boy Scouts for tent camping or sleeping in Adirondack shelters. The area adjoins Madison Lake State Park. Private boat rental is available nearby. See park description.

Central Ohio Council, Boy Scouts of America
1428 East Broad Street, Columbus 43215
(614) 253-5513

MADISON LAKE STATE PARK
183 acres

On SR 665 east of London

Park land with sparse vegetation surrounds a 100-acre lake formed by a small dam on a tributary of Deer Creek. A mixed hardwood woodlot may be observed near the picnic area. Of interest is the fact that the region was heavily glaciated by both ice sheets, Illinoian and Wisconsinan, leaving a thick coating of drift varying from 80 to 200 feet in thickness. The edge of a moraine is just southwest of the

park. Soil studies indicate high lime till which is poorly drained.

The lake and creek could be used for study of aquatic plants and animals, the creek for erosional and deposition features.

Park Manager
Madison Lake State Park
Route 4, London 43140
(614) 852-2919

PINE TREE TRAIL

40 acres

3 miles south of West Jefferson

Pine Tree Trail has been developed for teaching basic conservation, biology, forestry, wildlife management, and water and soil conservation. Demonstration and outdoor classrooms are provided. Varied tree species are present and the woodland abounds in wildflowers and other plants. The song and game bird population is reported to be outstanding. Wildlife nesting areas are unusually good. The property contains a natural flood plain of a glacial stream with the typical features present. The glacial drift is thick, the soil high in lime content. Elementary classes and college students have visited the trail for observation and study. Registration at least 45 days prior to the trip is required.

The property has a club house and other facilities, among them a fire ring for council and cooking fires. There is no charge for school groups. Overnight school camping may be arranged upon special request in the months of March through June, September and October.

Pine Tree Trail is another conservation education program of the Central Ohio Anglers & Hunters Club.

Herb Rumfield
330 Westwood Drive, Route 1, Galloway 43119
(614) 879-8188

PROCTER CONFERENCE CENTER

23 acres

On SR 38, 9 miles south of London

This property, with winterized lodge and cabins, is a church retreat. It is situated in an area of ecological interest which might well be studied from the center. It lies on a thickly coated glaciated plain near the Bloomingburg moraine; the moraine deposit indicates a halt in the wasting back of the Wisconsinan ice sheet emphasized by the large number of boulders associated with it. The underlying rocks are Silurian dolomite, the soil high in lime content.

Of interest also is the fact that the region originally contained plots of prairie, remnants of which may be found. The site is largely lawn and meadow, some of which is reported to be left in a natural state. There are trees in the oak-hickory association, some wildflowers and animals. A pond provides habitat for aquatic plants and animals.

Manager
Procter Conference Center
P.O. Box 202, London 43140
(614) 852-3513

SHADY MEADOW FARM

70 acres

Off US 42 on Converse Huff Rd.

Early in Ohio history, Amish farmers discovered the productive agricultural land in Madison County. Many neat homesteads remain to reflect the arduous labor and fastidious pattern of living characteristic of these people. Shady Meadow Farm is such a property. It provides an unusual opportunity for groups of all ages to see the farm animals, the milk house, the windmill, the grain bins, the hay mow, the way of living carried out on a typical Amish farmstead by Amish Mennonite people. They are serious farmers willing to share their way of life with youngsters who might otherwise never know this part of our cultural heritage.

A modest fee is required.

Jacob P. Stolzfus
Route 2, Plain City 43064
(614) 873-5425

MAHONING COUNTY

BERLIN RESERVOIR STATE WILDLIFE AREA

6,763 acres

On SR 224 north of Alliance

This large reservoir and surrounding territory were glaciated by the Wisconsinan ice sheet. The area is on the relatively smooth Allegheny Plateau dissected by the Mahoning River. The soils are acid and poorly drained; three marshes are scattered throughout. There are a few timber stands in both the beech-maple and swamp forest type where wildflowers are abundant in the spring.

A large number and variety of waterfowl may be seen in the spring, but the fall migration is not as spectacular because of severe water drawdown. Furbearers are common, and especially interesting is a beaver colony on the area. Nesting woodcock are found also. Parts of the property are

noted for warblers during migration periods. Fish, wildlife, forestry, and soil and water conservation practices may be studied.

Division of Wildlife District 3 Office
912 Portage Lakes Drive, Akron 44319
(216) 644-2293

HOLY FAMILY SCHOOL LAND LABORATORY

7 acres

On US 224, just east of Poland

This outdoor education property is wooded with oak and sugar maple as well as many other species. Wildflowers are abundant and furbearing animals may be observed. A stream adjacent to the property allows creekside studies. The area has been glaciated and has a thin covering of glacial deposits. The underlying rock strata are Pennsylvanian in age with the lower Mercer limestone outcropping in the stream bed at an elevation of 950 feet. An outdoor science class shelter is available. Attached to the shelter are hotbeds for seed propagation.

Manager
Holy Family School Land Laboratory
Diocese of Youngstown
221 Center Road, Poland 44514
(216) 757-1545

LAKE MILTON RECREATION AREA

Land 1,700 acres Water 2,700 acres

18 miles west of Youngstown. Reached from I-76, SR 534, and US 224

Lake Milton, formed by impoundment of the Mahoning River in 1922 for Youngstown water supply, is seven miles long and ideal for boating and fishing. It has four areas of special interest: a swimming beach on the east side of the long lake; a roadside park just south of the beach, where parking as well as other facilities are available with some woodland of mixed oak and hickory; an area in different stages of field succession located at the extreme south end of Shilling Road. A few oaks and elms remain. There are no trails, but the sites are valuable for studying the vegetation, soils, and water life. One other area on the west side is accessible only by boat. It is a woodland with mixed oak, hickory, red maple, and a few remaining elms.

Edward Finamore, Park Superintendent
City Hall
Youngstown 44502
(614) 743-7219

MAHONING COUNTY JOINT VOCATIONAL SCHOOL LAND LABORATORY

158 acres

On North Palmyra Rd., one-half mile north of US 224 at Canfield

This outdoor laboratory on former farmland recently purchased for the construction of a county vocational school is in the process of development. A four-acre lake is to be built, and a landing strip and other site improvements made.

The property designated for outdoor education purposes is on level to rolling land with defined drainage ways. Part is wooded—just one of the many natural resources which can be developed for outdoor laboratory programs. School and community may find this project a delightful cooperative endeavor.

Superintendent
Mahoning County Joint Vocational School
Palymra Road, Canfield 44406
(216) 533-0871

MILL CREEK PARK

2,389 acres

In the City of Youngstown and Boardman Township

Termed "a scenic oasis in an industrial valley," Mill Creek Park has been preserved for its natural beauty and for recreational purposes since 1891. The park begins where Mill Creek joins the Mahoning River and runs southward along a deep gorge for seven miles.

Geologically, the rock exposures indicate that both Mississippian and Pennsylvanian formations are present, the resistant layers responsible for the waterfalls in the gorge. Three lakes, numerous ponds, and swamps as well as the river provide plenty of water for boating and for the study of aquatic plants and animals. Replicas of old stern-wheel riverboats are used for sight-seeing.

The wooded hillsides are covered with oak-sugar maple forest type with walnut, hickory, and many other species observable. Hemlock, as glacial relict vegetation, persists in the cool, moist gorge. Trained naturalists conduct nature walks along the extensive trails where wildflowers, shrubs, birds, and trees can be studied. They also acquaint visitors with the history of the region.

In 1972 the new Ford Nature Education Center on Old Furnace Road replaced the Old Mill nature museum. The building contains two exhibit rooms, offices of the park naturalist, meeting and class rooms, a nature library and gift shop. Labeled and self-guiding nature trails are provided throughout the grounds and adjacent park areas. Picnics may be held in Pioneer Pavilion, a one-time woolen mill built in 1821.

Park Naturalist
Mill Creek Park
Youngstown Township Park District
816 Glenwood Avenue, Youngstown 44502
(216) 744-4171
Ford Nature Education Center: (216) 743-5868

MILLWOOD CAMP

60 acres

Off SR 18 near north Jackson

This Girl Scout camp lies on the glaciated, relatively smooth Allegheny Plateau. A creek running through the

property has dissected the glacial drift to expose the Pennsylvanian age sandstones and limestones. A large portion of the property is wooded, oaks predominating.

A winterized lodge with food service facilities and tent units comprise the living facilities. Field trips or possibly school camping may be arranged when Scouts are not using the property.

Camp Registrar
Lake-to-River Girl Scout Council
55 South Main Street, Niles 44446
(216) 652-5877

POLAND MUNICIPAL FOREST
242 acres

Within the Village of Poland, largely west of Yellow Creek and south of Drake Run

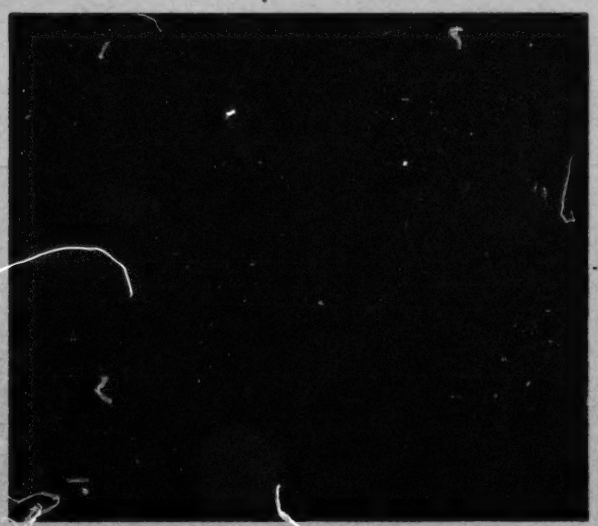
The first of its kind in Ohio, the Poland Municipal Forest was established by ordinance in 1958. The original 212 acres were a gift with the expressed wish that they should be preserved in their natural state insofar as it is possible. Although additional plots of land have been added, bridges, shelter houses and trails constructed, pine plantations, sycamores and red gum seedlings planted, the forest has remained a bird and wildlife sanctuary.

The rolling topography and flood plains of the two streams provide habitat for a wide variety of trees, understory plants and wildflowers. Originally beech-maple forest covered the upland areas. Probably the forest is best known now for the Virginia bluebells which bloom profusely near the middle of May.

The area lends itself well to the study of the relationship of the streams, the soil, and the effects of glaciation upon the plant and animal life found. Man's place, too, in the ecology of the area, his efforts in management and preservation, could be a subject of extensive research.

William Gutknecht, Chairman
Poland Municipal Forest Board
308 South Main Street, Poland 44514
(216) 757-2112

MARION COUNTY



BIG ISLAND STATE WILDLIFE AREA
1,043 acres

On SR 95, 5 miles west of Marion

This property is very flat, with predominantly dark colored, poorly drained soil formed from clay. The soil type is similar to some of those found in the old lake bed region of northwestern Ohio. The underlying rocks are thin-bedded dolomite of the Tymochtee member of the Monroe formation.

Eight ponds have been constructed on the acreage to attract waterfowl. Pheasant, quail, dove, fox squirrel, raccoon, and woodcock inhabit the area. Deer are seen occasionally. Situated in one of the larger plots of original prairie vegetation, remnant plants are found. Wildlife and soil and water conservation practices are being applied.

Division of Wildlife District 1 Office
1500 Dublin Road, Columbus 43212
(614) 466-3337

OWENS BOY SCOUT CAMP
55 acres

Off SR 423, 5 miles south of Marion

Mostly wooded with large mixed hardwoods and conifer plantings, this camp is a good site for field trips. It is located on flat till plain, the soils generally thin, with high lime content. A small stream dissects the plain to form a little topographic relief and expose the Devonian age limestones below.

A three-fourths-acre pond provides habitat for aquatic plants and animals. Hiking trails have been developed along the stream and in the majestic woodland.

Manager
Owens Boy Scout Camp
217 West Church Street Marion 43302
(416) 382-4142

MEDINA COUNTY

HINCKLEY RESERVATION

1,925 acres

Reached from Bellus Rd. north, Parker Rd. on east, Ledge Rd. on south, or Co. Rd. 44 right through the middle

This property is a southern extension of the Cleveland Metropolitan Park "Emerald Necklace." It is a fascinating area geologically because it contains excellent exposures of the Sharon formation, a basal conglomerate of the Pennsylvanian period. A section of the park known for generations as Whipps Ledges has footpaths winding around the large slump blocks as well as the bedrock in place. The hillsides have fine examples of beech-maple climax forest and the associated flora and fauna.

The east branch of Rocky River has been dammed to create a sizable lake, which, with the stream, gives many sites for observing water plants and animals. The great variety of habitats produces a good bird population. Of outstanding interest is the large number of buzzards which return each year to nest at or near Buzzard Roost.

Cleveland Metropolitan Park District
2048 Standard Building, Cleveland 44113
(216) 621-1034

MAPLE LAKES

120 acres

Left off SR 3 on Blake Rd., 7 miles south of Medina

This recreation area established around two lakes contains a forest of 700 sugar maples with a seasonal display of wildflowers associated with them. The property lies on the glaciated, gently rolling till plain with Mississippian age sandstones and shales beneath the thick glacial deposits. Soils are dominately acid. The lakes, fields, and woodland provide the three major habitats for studying plants and animals.

Manager
Maple Lakes
4275 Blake Road, Seville 44273
(216) 336-2251

SPENCER LAKE STATE WILDLIFE AREA

595 acres

Off SR 162, 2 miles northeast of Spencer

A 70-acre lake formed on the east branch of the Black River is the most outstanding physical feature of this reserve. The land is glaciated, gently rolling; the soils are acid and poorly drained.

The lake attracts a variety of waterfowl during migration periods. Wood duck, mallard, and teal nest on the site. Rabbit, squirrel, pheasant, quail, and furbearers are common. A large part of the property is wooded predominately in the beech-maple forest type with scattered stands of oak-hickory. Fish, wildlife, and soil and water management practices may be seen.

Facilities are limited to parking and a boat ramp.

Area Manager
Spencer Lake State Wildlife Area
Route 2, Seville 44273
(216) 644-2293

WILDWOOD LAKES

180 acres

1 mile south of US 224 at Homerville, then 1 mile east

The three small lakes, a stream, 15 acres of woodland, and open fields comprise the three major habitats for studying plants and animals. This campground lies on glaciated, slightly rolling land.

The wooded area is the beech-maple forest type with many species of trees, shrubs, and wildflowers in the association. Hiking trails have been developed, making a reasonably good field trip possible.

Manager
Wildwood Lakes
Route 1, Homerville 44235
(216) 625-2467

MEIGS COUNTY

BELLEVILLE LOCKS AND DAM

3,965 acres

On the Ohio River near Reedsville and the Shade River State Forest

In order to make the Ohio River navigable for more than canoes and small steamers—in order to open the Midwest for the high degree of development which it has experienced since frontier days—the United States Government enacted a River and Harbor Law in 1909 authorizing dam structures.

The present Belleville locks and dam were constructed in 1962-69 to replace earlier, less efficient ones. The dam is a high-lift, non-navigable, gated structure whose top length is 1,206 feet. Tainter gates, piers, and a weir provide a damming height of 32 feet above sills, with clearance above maximum high water approximately five feet. Two parallel locks service the boats and barges.

A recreation area at the dam site provides facilities, a few scattered trees, songbirds and occasional game birds.

The river is bordered with a rich mixed hardwood forest on maturely dissected hillsides cut into the youngest rocks in Ohio, the Permian formations. A study of the area, including the previously glacially fed river itself, the lock and dam system, and the physical environment could enhance historical awareness, increase knowledge of navigation and commerce, and create appreciation for the natural Ohio woodlands.

Robert G. Beagle, Lockmaster
P.O. Box 118, Reedsville 45772
(614) 378-6110

BUFFINGTON ISLAND PARK

5 acres

At Portland on SR 124

This small park commemorates two of the invasions of the North by Confederate forces during the Civil War. It is the only Civil War battle site on Ohio soil. An Indian Mound and the McCook Memorial add to the interest of the Ohio River site. Trees, flood plain, and river may be observed also.

Ohio Historical Society
Columbus 43211
(614) 466-4663

CAMP KIASHUTA

125 acres

2 miles southeast of Chester off SR 7

The development of this secluded Boy Scout camp was begun in 1934 by WPA funds and labor. The camp is situated on the high wooded hills and the deep valleys typical of areas along the Ohio River. Shade River runs through one corner of the property. A suspension cable footbridge makes the total acreage accessible.

The woodland is in the oak-hickory forest type; no recent timbering has taken place, which has permitted the trees to grow to fairly large size. Topped by residual acid soil underlain by Permian age sandstones and shales, the land supports flowers and shrubs typical of southern Ohio.

The area was named for Indian Chief Kiashuta, who met and camped with Colonel George Washington nearby, according to the first President's diary. A marker may be seen along SR 124 in the Ohio River valley.

A large cabin with fireplaces and electricity, plus marked and unmarked hiking trails are available.

William R. Knight
2903 Parrish Avenue,
Point Pleasant, W. Va. 25550
(304) 675-3275

FORKED RUN STATE PARK
SHADE RIVER STATE FOREST

Park - 794 acres Forest - 2,409 acres

Park on SR 124. Forest west and north of SR 124

A sense of space and timelessness accompanies one who explores these many acres. The Shade River watershed is west of the Ohio River as it meanders through a wide valley. But the topography consists of high hills and narrow valleys, with the stream eroding through the Permian age rocks to the upper Pennsylvanian sandstones and shales below. Massive outcrops of sandstone occur along the Ohio valley and in the ravines.

Forked Run State Park has an outstandingly beautiful campground on the hilltops overlooking the countryside. Much of the area is wooded, although old fields remain as evidence of rather futile farming. The primary forest type is oak-hickory, but beech is prominent in places. Flowers, birds and other animals may be observed from the hiking trails. Spring and fall are the most delightful seasons for field trips.

Park Manager
Forked Run State Park
Route 1, Reedsville 45772
(614) 378-6206

Forest Ranger
Shade River State Forest
Route 1, Reedsville 45772
(614) 378-6116

HIDDEN LAKES

70 acres

1 mile east of junction of US 33 and SR 7, off SR 7

Tucked behind the Forest Run Block Company, this secluded area offers many choice kinds of wildlife study. Two small dams have impounded lakes which are stocked with fish and on whose waters migrating waterfowl such as hooded mergansers may be found in early spring. Fifty-five acres of woodland of mixed hardwoods along the valley and on the hillside provide habitat for a wide variety of birds. Pileated woodpeckers are seen frequently. Wild turkey and grouse are reported to be abundant but are hard to see. Deer, mink, muskrat, raccoon, and perhaps bear are in the area.

The season is from April to November.

M.K. Roush
Box 222, Pomeroy 45769
(614) 992-5840

ROYAL OAK PARK

130 acres

On Wells Rd., off SR 7, 4 miles northeast of Pomeroy

This park is a well-developed campground where some good forest land has been retained in the ravines and on a

hilltop bordering the campground. One camping area is wooded with large white oak trees. Other forested parts of the park are also in the oak-hickory association. Wildflowers, birds, and small mammals are abundant. A small lake with a marsh area at one end provides habitat for water plants and animals. Classes are invited to visit the owner's farm, where Hereford cattle, horses, and ponies are among the animals to be seen. The camping season extends from May to November.

Horace Karr
Star Route, Pomeroy 45769
(614) 985-3341

SOUTHEAST BRANCH (OARDC)

330 acres

On SR 143 near Carpenter, 3½ miles south of Albany

A tractor-wagon tour may be arranged to explore this large experimental farm of the Ohio Agricultural Research Development Center (OARDC). The property has been state owned since 1902, when it was donated by Senator Carpenter. One hundred acres are in pine and hardwood forest with nature trails. Another 100 are devoted to agronomy practices with research on small grains and forage. Here and in the wildlife area various conservation practices such as erosion control and diversion ditches may be observed.

Three ponds and a spring provide water and habitat for aquatic plants and animals. Pasture research is conducted on another 100 acres with 160 head of Hereford, Angus, Charolais, and crossbred cattle. Visitation may be made from April to October.

Manager
Southeast Branch OARDC
Route 2, Albany 45710
(614) 698-4521

MERCER COUNTY

GRAND LAKE ST. MARYS STATE PARK

13,849 acres

On SR 29, west of St. Marys

This large artificial lake of approximately 13,500 acres was built originally as a feeder lake for the Miami-Erie Canal. The area is more interesting historically than as a natural environment, but bordering the park are two excellent wildlife preserves. One is the state waterfowl refuge on the southwest side of the lake, the other a state fish hatchery on the east side. Waterfowl, especially geese, and shorebirds are numerous. The park facilities are available for groups visiting any part of the area. A naturalist is on duty from mid-June to Labor Day.

Park Manager
Grand Lake St. Marys State Park
Box 308, St. Marys 45885
(419) 394-3611

HARBOR POINT 4-H CAMP

24 acres

1 mile east of Celina on Grand Lake St. Marys

A variety of educational experiences are possible at this camp situated on Grand Lake St. Marys. Constructed in 1837 to make a feeder reservoir for the Miami-Erie Canal, the lake, when built, was the largest man-made body of water in the world. It is now one of Ohio's favorite recreation areas.

The camp property is largely sand beach with a small wooded area. Water chemistry and a study of water life, especially fish, suggest themselves as outdoor education programs. Shore and water fowl, including great blue heron, may be seen in great numbers, especially during spring and fall migrations. Buildings are not winterized but cabins and dining hall will accommodate 150 people. Modern sanitary and recreational facilities have been added recently.

County 4-H Extension Office
Court House
Celina 45822
(419) 586-2179

MERCER COUNTY WATERFOWL REFUGE

Land - 300 acres Water - 700 acres

Southwest corner of Grand Lake St. Marys

Two aspects of this refuge are particularly interesting. First is the large variety and number of waterfowl, especially during spring and fall migration, which feed and nest here; and second, the cultivation of crops to feed them. Lying on a glaciated plain underlain by the Niagara dolomite of Silurian age and containing soils of high lime content, the land is able to supply ample grain for the birds. In addition to the migrating waterfowl, Canada geese, mallard, wood duck and small numbers of other waterfowl nest here. The 700 acres of water in the refuge include eight ponds and one channel. The area should be very productive for studying waterfowl and other aquatic animals and for plants as well.

The refuge is open only on special days during the year from June 1 to March 31.

Manager
Mercer County Waterfowl Refuge
Route 5, Celina 45822
(419) 268-2020

MIAMI COUNTY

BUCKEYE TRAIL

25 miles

The trail enters the county south of Tipp City and follows the Miami-Erie Canal and the Miami River northward to Lockington

The trail is mostly a water-level route across the county. The woodland is chiefly mixed mesophytic and swamp forest except on the higher ground north of Troy, where it is beech-maple type.

North of Piqua, the trail skirts the Piqua Historical Area. (See description following.)

For maps and further information contact:

Buckeye Trail Association, Inc.
P.O. Box 254, Worthington 43085

CAMP INDIAN HILLS

52 acres

On Lauver Rd., 1 mile west of SR 48 and Pleasant Hill

Advantageously situated on the Stillwater River, which gives diversity of habitat and topography to the site, this camp is a fine study area. Twenty acres are woodland and prairie left in their natural state in order to attract wildlife and to be used as an outdoor laboratory. Adjacent land contains wildlife plantings of trees and shrubs for the same purpose.

The river, with its erosional and depositional features, soil profiles cut in the banks, and exposures of both Ordovician and Silurian rocks, contributes to the natural history of the area. Natural resource specialists from Ohio State University indicate that many fairly rare plants are found on the forest floor.

A winterized lodge with kitchens and restrooms sleeps 40 persons and is available for year-round use. Ten cabins, a farm pond, the Miami County Historical Society Museum, and a river suitable for canoeing are additional attractions. Additional facilities planned are a bird blind, weather station, wildlife pond, rifle range and sundial.

Manager
Camp Indian Hills
8212 West Lauver Road, Pleasant Hill 45359
(513) 676-5103

PIQUA HISTORICAL AREA

174 acres

On SR 66 northwest of Piqua

An extensive effort is under way to develop one of the best historic complexes in the state. This project centers on the Johnston Farm—the site of Fort Piqua c1795, a prehistoric Indian earthwork, and the home site of the Miami Indians—and Fort Pickawillany, an English fur trading post, 1749-52, yet to be purchased.

Johnston Farm has a restored house as of the 1810-15 period, a log barn of 1808, and a large brick spring house of 1815. Col. John Johnston was an important Indian agent, first at Fort Wayne, then at Fort Piqua. An historic Indian museum is also located near the sites. A portion of the Miami-Erie Canal is used as a waterway for a reconstructed canal boat equipped to carry passengers. The towpath along the canal may serve as a hiking trail from this area to the Lockington Locks about a mile north, another part of the historical complex. Trees and other plants may be observed along the canal and the river. Picnic facilities are available here.

To the north, and still in private hands, is a fur trading post known as Fort Pickawillany. Historically it was an important political center contested by England and France. The Miami Indians traded with the French at this site as early as 1690. The town close by, which was called Twightetwee by the Miamis, was probably destroyed during the French and Indian Wars.

The Piqua Historical Area is open Tuesday through Sunday, April 1 - October 31. A small admission charge is made to tour the area.

The Ohio Historical Society
Columbus 43211
(614) 466-4663

PIQUA LIMESTONE QUARRY

1,000 acres

On the south edge of Piqua

For many years Armco Steel in Middletown has quarried the hard, relatively pure Brassfield limestone of Silurian age from this site to use as a flux in the steel furnaces. A look at the extensive quarry area is worth a trip to the site. Fossil hunters find good collecting in the Dayton limestone, immediately above the Brassfield formation, which contains few fossils. Corals, several species of brachiopods, a few cephalopods, and gastropods constitute the major findings. The surface of the Dayton at the north end of the quarry is marked with good glacial grooves.

Visits are permitted only on weekends when the quarry is not in operation.

Manager
Piqua Quarries
P.O. Box 911, Piqua 45356
(513) 773-4824

MONROE COUNTY

MONROE LAKE STATE WILDLIFE AREA

1,332 acres

On SR 800, 5 miles north of Woodsfield

The area lies in hilly terrain typical of unglaciated Ohio. Broad open ridges are under cultivation, and steep wooded slopes descend to the narrow valley floor of Baker's Fork, on which 39-acre Monroe Lake is impounded. The topography varies from an elevation of 1,020 to 1,400 feet above sea level. The soils are residual and acid, underlain by Permian age bedrock, the youngest in Ohio.

About half the land is wooded; oak and hickory dominate the drier slopes, with beech, maple, elm, and ash common on the lower slopes and along the streams. The remaining half is under cultivation or covered with mixed brush, grasslands, and conifer plantings.

Good populations of squirrel are produced; deer and ruffed grouse are in lesser numbers. Other birds and furbearing species are present. Migrating waterfowl utilize the lake. There is a 5½-mile nature trail around the lake where the trees are marked. Beaver dams and wildflowers may be seen.

Division of Wildlife District 4 Office
360 East State Street, Athens 45701
(614) 593-6933

SUNFISH CREEK STATE FOREST

638 acres

On SR 7, 4 miles north of Clarington

This relatively new state forest is undeveloped but scenic and rich in flora and fauna. The terrain is rugged with high bluffs overlooking the Ohio River. The area is not glaciated, but glaciation runoff resulted in much abrasion and lowering of the stream beds. The hills are topped with Permian age rocks but the exposures in Sunfish Creek valley extend down into the Pennsylvanian coals, calcareous shales, and freshwater limestones. The forest hillsides are primarily beech-maple and tulip stands interspersed with pine plantations on the ridge tops. The area surrounding Sunfish Creek contains beautiful and unusual wildflowers and other plants. Spring, summer and fall are hiking months.

Division of Forestry District 5 Office
360 East State Street, Athens 45701
(614) 593-6388

MONTGOMERY COUNTY

AULLWOOD AUDUBON CENTER

70 acres

On Aullwood Rd., north of I-70 off SR 40 at Englewood Dam

Aullwood is a wildlife sanctuary owned and maintained by the National Audubon Society and dedicated to the teaching of environmental awareness. Field trips under the leadership of professional naturalists are conducted throughout the school year. Conservation workshops for teachers and youth leaders are arranged on request. The nature interpretation building features exhibits, live cold-blooded animals, and a sales department for nature and conservation books and materials.

A special feature of the Aullwood sanctuary is a restored bit of native Ohio prairie. Here big bluestem and Indian grasses tower 10 to 12 feet into the air. Walking through these grasses is like walking through a "grass jungle," with Indians and bison being the only missing elements. The prairie puts on its best show in August and September when the grasses are grown to full height and the forbs (herbaceous plants other than grasses) are in full bloom.

Picnicking is not permitted but scheduled groups present at lunch time may make prior arrangements to bring a sack lunch. Picnic tables, shelters, and other facilities are conveniently available for other visitors at Englewood Reserve adjacent to the Aullwood property. Fees are now required for class visits.

Director
Aullwood Audubon Center
1000 Aullwood Road, Dayton 45414
(513) 890-7360

AULLWOOD AUDUBON FARM

120 acres

On Frederick Rd., adjacent to Englewood Reserve and Aullwood Audubon Center

A working farm and conservation center, this area, maintained by the National Audubon Society, features typical farm livestock, farm equipment, and the interpretation of farm life in a natural setting. For first and second grades, a visit to the farm is unguided. Guided tours are scheduled for third grade and up. Several lesson plans are provided from which the teacher may choose: Soil, Water, Life of a Honey Bee, Wool From Fleece to Fabric, Making Maple Syrup, Herbs and Their Uses--Past and Present, and Farm Management.

Special programs presented are: Candle Dipping, Farm Gardening for Youngsters nine to 13 years of age, Sheep Shearing, and the Honey Harvest. Other educational programs are available as requested by the teacher.

At various times during the year workshops are held for teachers and youth leaders. Indoor facilities are provided for scheduled groups. Fees for all programs are now required.

Director
Aullwood Audubon Farm
9101 Frederick Road, Dayton 45414
(513) 890-2963

BUCKEYE TRAIL

17 miles

The trail enters at Wright Patterson Air Force Base and follows the Mad River to the Great Miami River, then northward along the river bank and levees to Miami County

The trail is primarily a water-level route through Montgomery County. It passes through the Taylorsville Reserve, near Aullwood Audubon Farm and Aullwood Audubon Center.

For maps and further information contact:

Buckeye Trail Association, Inc.
P.O. Box 254, Worthington 43085

CENTERVILLE-WASHINGTON PARK DISTRICT

Through the efforts of enthusiastic citizens of Centerville and Washington townships, a park district was established and land procured for green islands and open space. Nature parks, community parks, and many neighborhood parks are available with more sites potentially a part of the system. For trail guides, information, and reservations, contact:

Park Director
Centerville-Washington Park District
2222 Arbor Avenue, Dayton 45429
(513) 294-4008

BLACK OAK PARK

30 acres

East of Centerville off Franklin St.

This is a rolling natural area providing opportunities for nature study and hiking. Picnicking facilities are available along a small branch of Sugar Creek. The park adjoins Black Oak Swim Club.

CONCEPT PARK

6 acres

Southeast of Centerville off SR 48

This park, an open meadow with a grove of beech and locust trees and landscaping, provides limited nature study. The area is used primarily for active recreation. A shelter and picnic tables are available, as well as a flooded area for ice skating in winter.

DONNYBROOK PARK

4½ acres

Just off Dayton-Lebanon Pike, north of Centerville

This park is on slightly rolling terrain giving access to a branch of Holes Creek. A one-acre marsh in a low area has cattail, reed, and other marsh vegetation and animal life. The area is partly wooded.

GRANT PARK

101 acres

401 Normany Ridge Rd., northwest of Centerville

Recognized as a "nature park," the property borders the main course and one branch of Holes Creek, a tributary of the Great Miami River, for a distance of 1½ miles. Two pools with cascading water over rock outcroppings between them provide ample habitat for aquatic life. The park is heavily wooded in some places with the oak-hickory forest type and the neutral soil trees typically found in the area. Wildflowers, birds, and mammals are fairly abundant. Fields in natural succession provide the third major habitat for study. Fossils of the Richmond formation of the late Ordovician period may be collected along the stream.

Grant Life Science Center is operated by the Board of Education and runs a year-round nature and science program using Grant Park as an outdoor laboratory. The 15-acre Normany School site adjoins the eastern edge, and the Hadley Watts School containing 55 acres joins the western edge of the park. Teachers of grades kindergarten to ninth bring classes for half-day or daylong sessions. Sixth grade classes may attend a four-day camping session during the school year. Summer day camps are operated by Girl Scouts, Camp Fire Girls, and other youth groups. School facilities, three dormitories, three laboratories, and an outdoor amphitheater are available for the program.

CENTERVILLE-WASHINGTON PARK DISTRICT (Cont.)

IRON HORSE PARK
26 acres

North of Centerville, east off SR 48 at Whipp Rd.

This rolling area will be developed to provide a community park serving the northeast part of Centerville.

MEAD PARK
12 acres

2 miles west of Centerville, off SR 725 at Yankee St.

Mead Park is, for the most part, an open meadow with a grove of trees.

OAK CREEK SOUTH PARK
18 acres

1 mile west of Centerville on Rt. 725

This is a community park which will be developed to serve the residents of Centerville and Washington townships. A small lake is available for fishing, water studies, and ice skating in the winter.

OLD LANE PARK
4½ acres

Northwest of Centerville

Rolling, open meadow with the east boundary a heavily wooded old farm lane, the area has possibilities for study.

PLEASANT HILL PARK
5 acres

In Centerville on Zengel Dr.

This is primarily an open meadow used for baseball and soccer. A small grove of trees provides an area for picnicking. The park adjoins Pleasant Hill Swim Club.

RAHN PARK
1¼ acres

North of Centerville off SR 48 on Rahn Rd.

This small park, an open meadow in an old apple orchard, is a delightful place to relax and watch the birds and children at play.

ROSEWOOD PARK
12 acres

South of Centerville off Sheehan Rd.

This open field with a grove of trees is used primarily for recreation. A three-acre lake is available for fishing, water studies, and ice skating in the winter months.

SUGAR VALLEY PARK
70 acres

East of Centerville and south of Franklin St.

A nature park bordering the north branch of Sugar Creek, a tributary of the Little Miami River, Sugar Valley Park is heavily wooded with oak, hickory, beech, and maple trees. Wildflowers, birds, and animals are fairly abundant.

WOODBOURNE GREEN
one-half acre

Northwest Centerville at Whipp and Paddington roads

A small area commemorating the village of Woodbourne, settled in the early 1800s, the park adjoins a small historic graveyard.

YANKEE PARK
26 acres

West of Centerville limits on Yankee St.

This park has 22 acres of gently rolling open meadow and four acres of dense woods. The wooded section has trails and is excellent for nature walks.

DAYTON-MONTGOMERY COUNTY PARK DISTRICT

Formed in 1963 to acquire and develop open space for the residents of Montgomery County, the district is now managing eight reserves with an area of 4,119 acres. Four of these are leased sites at flood control dams constructed by the Miami Conservancy District. Facilities provide year-round enjoyment for family groups, youth organizations, and senior citizens. In addition, the varied natural habitats provide opportunities for students, conservationists, and bird, flower, tree and rock enthusiasts to observe the beauty and research the wonders of natural phenomena. An arboretum has been added recently to the park district's holdings increasing the diversity of educational opportunities.

Dayton-Montgomery County Park District
1375 East Siebenthaler Avenue, Dayton 45414
(513) 278-8231

COX ARBORETUM
164 acres

On SR 741 between West Carrollton and Miamisburg

The development of facilities, horticultural plantings, and programs is well under way for this new arboretum which was added to the Dayton-Montgomery County Park System in 1973. Lying in and along the enlarged flood plain and filled flat valley of the Great Miami River, it has a varied terrain for habitat development. Fifty acres of woodland in the oak and sugar maple association have hiking trails which allow for studies of wildflowers, birds, and small mammals. A new pond has been constructed, around which is a synoptic garden, one which embraces all kinds of woody and herbaceous plants. Thirty-five European hornbeam are already planted. An activities center and parking lot are available. No picnicking is permitted here, but Possum Creek Reserve is nearby.

DAYTON-MONTGOMERY COUNTY PARK DISTRICT (Cont.)

DRY LICK RUN RESERVE
522 acres

On Shull Rd., north of I-70 off SR 201

This park is mostly open meadows and shrubland in natural succession on abandoned farmland. One section also includes second growth woodland. The terrain is flat to gently rolling. A 1½-acre pond in the woodland makes an ideal aquatic study area. Plant life is typical except for an abundance of black haw *(Viburnum prunifolium)*.

Carriage Hill Farm on this site has the Arnold Homestead available for meetings, a barn with farm animals, trails, creek, and a day camp area. A trail map is available.

ENGLEWOOD RESERVE
1,072 acres

On SR 440 and 48, north of Dayton

The Stillwater River, its filled glacial valley and flood plain, the Niagara escarpment with waterfalls and upland, the marsh areas and impounded waters are all physical features contributing to the wide variety of unusual biota found here. The large marsh attracts concentrations of migrating waterfowl and shorebirds. This area includes the Blincoe Wildfowl Sanctuary. A managed Scotch pine plantation reproduces naturally and harbors saw-whet and long-eared owls. The Brassfield limestone, the "firestone" of Silurian age, and Ordovician limestones and shales are the underlying bedrock, the latter very rich in fossils.

A trail map is available. Aullwood Audubon Center and Farm are adjacent.

GERMANTOWN RESERVE
791 acres

Off SR 725, 1 mile west of Germantown

This site features a climax beech-maple forest which approaches mixed mesophytic in composition and is unusual in quality. It lies on highly dissected glacial deposits of sand and gravel. The bottomland along Twin Creek is dominated by sycamores, silver maples, and cottonwoods. The stream flowing through the area offers interesting water habitat. Flora is outstanding in spring, summer, and fall. Diverse fungi are present in season. Fossils may be found in the exposed Ordovician limestones and shales. Camping (including day camping), interpretive walks, and self-guiding trails suggest program possibilities.

POSSUM CREEK RESERVE
482 acres

Off SR 4, southwest of Dayton, on Frytown and Shank roads

The gently rolling terrain of former farmland, several small ponds, and streams on glacial till provide the physical environment of this site. Some small woodland areas are forested with beech, oak, tulip, and hickory. Seral shrublands and meadows may be studied. It is an excellent birding property. Possum Creek Farm will be restored to the 1880 period and used as a rural life center. Sycamore Lodge, used for training, conferences, and meetings, accommodates 200 people.

TAYLORSVILLE RESERVE
325 acres

On SR 440 east of Vandalia

Situated on the Miami River—which lies below the escarpment of Niagara dolomite, forming waterfalls, flood plain and a filled valley of glacial outwash—this is an excellent area for ecologic and geologic studies. Ordovician strata, the Richmond formation, and the Brassfield limestone are exposed below the resistant dolomites.

Second growth to mature woodlands, with oak, sugar maple, hickory, and beech, are found on the upland. The seasonal display of wildflowers is outstanding; birds and animals, including deer, can be observed. A pine plantation provides cover for unusual bird life. In addition, there is the Miami Conservancy flood control dam, and a section of the Buckeye Trail follows along the towpath of the Miami-Erie Canal for about three miles. Classes may join public groups in interpretive walks or use the marked trail system leading to points of interest.

E.V. JOTTER LAND LABORATORY
25 acres

Highview School on McArthur Ave.

Property back of the school was scheduled for a fill-in dump 10 years ago. Now through the efforts of school administrators, teachers, and interested citizens, it is a haven and a rich wildlife study area. The very large beech and sycamore were retained; hawthorn, buckeye, walnut, gum, and apple trees are in association. Twenty-two varieties of wildflowers and many birds find shelter in the original forest and undergrowth. The mile-long property is dissected by a small, consistent, and polluted stream with a small backwater or "bay" area. Abundant fossils of Ordovician age limestones and shales known as the Richmond are found in and along the stream.

Birds include cardinal, jay, mocking bird, Carolina wren, and several species of woodpecker and song sparrow. A naturalist is not available presently but visitors may seek guide service from the school personnel and Mr. Jotter.

Principal
Highview School
2101 McArthur Avenue, Dayton 45418
(513) 263-2678

MONTGOMERY COUNTY JOINT VOCATIONAL SCHOOL LAND LABORATORY
165 acres

On Hoke Rd. at the junction of I-70 and SR 49

Farming, forestry, and horticultural practices are demonstrated on this environmental education property. Thirty acres of mature beech-maple forest, five acres of new pine forest, a half-acre pond, one mile of flowing stream with extensive nature trails, agricultural land, and ten acres in

various stages of plant succession provide a variety of habitats for field study.

The land has a long history of productive agricultural use. It is sloping to gently rolling in topography, the Wisconsinan glacial till underlain with Silurian dolomite rocks. The stream provides access for geologic studies of erosion and deposition, glacial material and bedrock.

The school personnel welcome outside classes for field trips or more extended study. Students are available during school hours to act as guides. Facilities are available at the school.

Agriculture Supervisor
Montgomery County Joint Vocational School
6800 Hoke Road, Clayton 45315
(513) 837-7781, Ext. 52

NORTHMONT SCHOOL LAND LABORATORY
10 to 15 acres

In the junior and senior high school complex at Clayton

Basically a wooded area of the oak-sugar maple forest association on limestone soil, the property also contains specimens of hackberry, blue ash, buckeye, redbud, hickory, and walnut, some of these definite soil indicators. Adjacent to the Stillwater River valley, the site has two small streams dissecting the terrain, one a wet-weather stream only.

Hiking trails have been developed.

Northmont School Land Lab
Northmont Senior High School, Clayton 45315
(513) 836-5181

MORGAN COUNTY

BUCKEYE TRAIL
48 miles

The trail enters the county at Burr Oak State Park and crosses to the roadside park on SR 78

Entering the county on the west near Burr Oak Lake, the trail follows along old or little traveled roads through valleys and over hills of open pasture and woodlands. It crosses a covered bridge east of Chesterhill. It leaves a high ridge and drops down to the Muskingum River where it crosses at Stockport, then climbs again to high rolling hilltops.

The trail becomes increasingly interesting when it enters the Ohio Power Company Recreation Area a little west and south of Reinersville. This is an early strip mine area showing highwalls composed of late Pennsylvanian period coals, sandstones, shales, and limestones. The winding lakes created by the mining operation coincide with the trail for a number of miles.

In the marshes, ravines, and natural woodland many kinds of vegetation, mammals, and birds may be seen. Of particular interest are several beaver colonies. The reclaimed stripped area has attained considerable growth in places, providing wildlife food and protection.

Excellent camping sites and facilities are available in the Ohio Power Company Recreation Area in Bristol Township where the trail crosses SR 76, another site five miles northeastward, and at a picnic site at the Noble County line. Permits are required for use of sites. They may be obtained free by writing to the Ohio Power Company, McConnelsville, Ohio 43756. Ask for the free recreation area map.

Buckeye Trail Association, Inc.
P.O. Box 254, Worthington 43085

BURR OAK STATE PARK
3,253 acres

Along SR 13 and 78 near Glouster

Nestled among the silent hills of southeastern Ohio is a 664-acre lake providing a beautiful setting for Burr Oak State Park. The extensive acreage is located primarily in Morgan and Athens counties, but there is a substantial amount of land in Perry County as well.

The hilly terrain is the result of erosion in the lower Pennsylvanian age strata. The hills are covered with the typical oak-hickory vegetation and associated shrubs and wildflowers in season. Not so visible, but unmistakably present, are many small wild animals. A portion of the Buckeye Trail, with its blue blazes, winds through the area as a part of the park's network of hiking trails.

A beautiful lodge and cabins are available for overnight housing. A small nature center is located on the lodge side of the lake. A naturalist is on duty from mid-June to Labor Day. Naturalist service is available by appointment the remainder of the year.

Park Manager
Burr Oak State Park
Route 1, Box 29B, Glouster 45732
(614) 767-3570

CAMP DOUDA DALE
500 acres

Located south of Malta

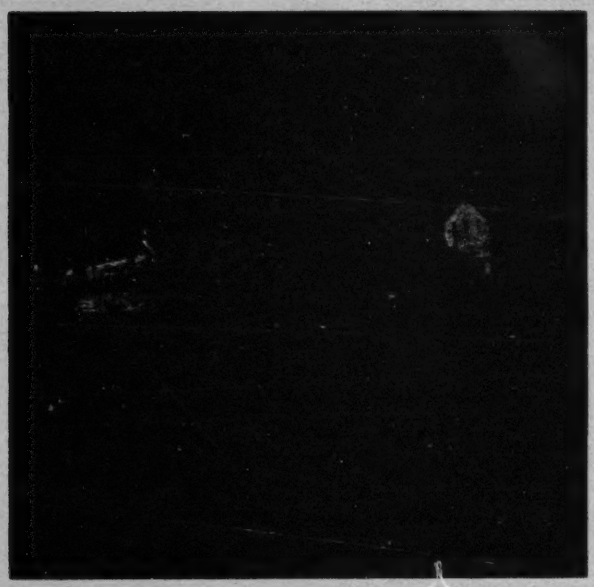
These beautiful acres, most of which are unspoiled woodland, lie in reserve for Girl Scout camping. For a field

trip for observing the relatively undisturbed ecology of an eastern Ohio forest, this camp is practically unsurpassed.

The property lies between a strip mine area on the west and the Muskingum River on the east. The largest ravine shows rugged rock exposures of the Pennsylvanian sandstones, shales, and limestones. A hike up the stream necessitates crossing and recrossing it many times.

Large oaks and other hardwoods, shrubs and small trees, a profusion of wildflowers, many birds and other animal life are available for wide eyes to see. Small steep ravines or tributary streams may be explored. Though not far from a center of human activity, the environment creates a sense of peace and remoteness. A farmhouse on the hill provides housing for small groups.

Camp Registrar
Seal of Ohio Girl Scout Council
P.O. Box 24, 1295 Hubbard Road, Galloway 43119
(614) 878-1381



MUSKINGUM RIVER PARKWAY STATE PARK
(See also Muskingum and Washington Counties)
27 acres

Located along the Muskingum River

At scenic spots along the river where dams and locks are located, small parks have been developed. They provide an excellent opportunity to study river bank vegetation and navigation procedures. In Morgan County these locks and dams are located at Stockport on SR 367, at McConnelsville on SR 60, at Luke Chute on SR 266, and at Rokeby Lock on SR 60. Locks are open only during the normal boating season.

Park Manager
Muskingum River Parkway State Park
Box 2806, Zanesville 43701
(614) 452-3820

OHIO POWER RECREATION AREA (CUMBERLAND MINE AREA)
100,000 acres total

In the northeast part of the county

The Morgan County section of this extensive strip mine area has 10 campsites, any one of which would make an interesting spot to study ecological developments. Remnants of the original vegetation, the topography, rock structure, and normal stream dissection provide a background of man's activity. Early settlers cleared the rolling hills of much of the beech and mixed oak forest and used the land for farming. A few of these farms remain.

The rich coal seams have been mined for many years for the purpose of supplying coal to produce electricity. In 1944, the Ohio Power Company began a forestry program to replace the coal resource with a renewable resource, namely wood. The Morgan County area shows the results of the program, for much of the county is returning to a woodland environment.

High rock walls, narrow winding lakes, ravines with native hardwood species, marshes, and streams provide habitat for birds and other animals, including beaver in the area near the Noble County line.

Of interest at the Spruce Valley campsite, in addition to the natural history, is a view of the unique Muskingum Electric Railroad. Permits are required for anyone leaving the state highway for field trips, camping, or picnicking. Maps and other information are provided.

The Ohio Power Company
P.O. Box 328, McConnelsville 43756
(614) 962-2013

Division of Wildlife District 4 Office
360 East State Street, Athens 45701
(614) 993-6933

WOLF CREEK STATE WILDLIFE AREA
3,600 acres

On SR 78, 7 miles southwest of McConnelsville

Wolf Creek courses through this large, unspoiled area, revealing limestone outcrops and many species of wildlife in and along the stream. In their beautiful natural setting beaver, muskrat, raccoon, wood duck, woodcock, softshelled, snapping and painted turtles, and large bullfrogs may be seen. Wildlife management practices are well developed.

SR 78 from the Wolf Creek area towards Burr Oak State Park is very scenic, known as the "Rim of the World."

Facilities of the wildlife area are limited to parking, thus making proximity to the state park a decided advantage.

Area Manager
Wolf Creek State Wildlife Area
Route 3, Malta 43758
(614) 962-2048

MORROW COUNTY

CAMP BROAD ACRES

600 acres

On Kunzie Rd., 1½ miles northeast of Chesterville

The three major habitats—woodland, field, and water—are amply provided at this site. The camp lies on the glaciated Allegheny Plateau which has been dissected to form rolling topography. The extensive wooded parts are beech-maple forest type with a profusion of dogwood at the forest edge. Streams have eroded through the glacial till cover to the Mississippian sandstones and shale which outcrop in the narrow ravines.

Two lakes with bordering marshlands and higher swamp areas give an abundance of study possibilities. The woodland areas shelter many wildflowers, birds, and small animals. Trails have been developed, giving access to varied habitats which in turn create a sense of quietness and appreciation of the natural world.

A small winterized lodge with food service facilities is available. Reservations must be made three months in advance.

Manager
Camp Broad Acres
Broad Street Presbyterian Church
760 East Broad Street, Columbus 43215
(614) 221-6552

DOGWOOD VALLEY CAMP

85 acres

On SR 61, 2 miles north of Mt. Gilead, one-half mile east on Twp. Rd. 99

Thousands of dogwood trees characterize this private recreation area, with many other trees of the beech-maple forest type in association. A six-acre spring-fed lake and the east branch of Whetstone Creek provide water for sport and study. Hiking trails, boats, and water bikes are available.

Dogwood Valley Camp
Route 1, Mt. Gilead 43338
(419) 946-5230

LUTHERAN MEMORIAL BIBLE CAMP

114 acres

On SR 61, 6½ miles south of Mt. Gilead

Virgin timber, a sugar bush, and acres of red and white pines are among the interesting features of this camp. Huge tuliptree in a beech-maple climax forest have an understory of herbaceous plants, among them many species of wildflowers.

The land is glaciated, Wisconsinan end moraine covering Berea sandstone and Bedford shale of Mississippian age. A small stream has cut through the relatively thin glacial till, giving erosional and depositional features for study. The stream is a tributary of Alum Creek near its headwaters.

The maple sugar operation takes place each year in early spring, yielding maple syrup, fun, and an educational experience.

The campus contains a large winterized lodge and sleeping cabins.

Manager
Lutheran Memorial Bible Camp
Fulton 43321
(419) 864-2766

MT. GILEAD STATE PARK

172 acres

On SR 95 east of Mt. Gilead

A double dam on Whetstone Creek creates 30 acres of lake and a beautiful setting for this small park. The area lies just at the edge of the Allegheny Plateau, with the Berea sandstone of Mississippian age exposed above the Bedford and Ohio shales. The region is glaciated and has a variable cover of the Wisconsinan drift. The hillsides above the lake are covered with a beech-maple forest and a large red pine plantation, with spruce plantings, an orchard, and cherry and dogwood trees adding diversity. Equisetum and skunk cabbage are in the swampy areas. The one-mile-long Sam's Creek Self-guiding Nature Trail is adjacent to the campground. Naturalist service is available throughout the year.

Park Manager
Mt. Gilead State Park
Route 3, Mt. Gilead 43338
(419) 946-1961

MUSKINGUM COUNTY

BAUGHMAN PARK

65 acres

On SR 586 just north of SR 16

This unique park was developed in the early 1900s by its patriotic owner as a memorial to Ohio's statesmen. The massive Black Hand sandstone formation exposed in the upper levels of the hillsides was quarried extensively in the early days of Ohio for the construction of bridges, railroad abutments, and buildings. When it was no longer economically feasible to use the rock, the abandoned quarries and surrounding hilltop were forested with conifers and returned to a somewhat natural environment. Huge blocks of the native sandstone were carved into statues of some of

Ohio's great men, including McKinley, Grant, Sherman, and Harding as well as Washington and the "Doughboy." The forest area includes many native Ohio trees; fossils may be found in the bedrock below the massive sandstone formation; and wildflowers and birds are abundant. Hiking trails, campsites, and a recreation building are available.

Mr. and Mrs. Ray Murray
Route 3, Frazeysburg 43822
(614) 828-3198

BLUE ROCK STATE PARK AND STATE FOREST

4,910 acres
Park - 337 acres Forest - 4,573 acres

5 miles south of Duncan Falls off SR 60; east on Co. Rd. 45

Nearly 5,000 acres of hill country on the east side of the Muskingum River were obtained by the state in 1936 under the Federal Land Utilization program. The hills are covered with oak-hickory, beech-maple hardwood forest types. In addition to these, the park area contains numerous pine plantations, with trees of considerable size giving something of a tucked-away forest-primeval aspect to the area.

Cutler Lake, of approximately 15 acres, was made by damming a small stream. The hills show mature stream dissection in the sandstones, shales and limestones of the Pennsylvanian period rock strata. Outcrops may be studied along the streams near the river level. One formation actually appears to be blue, especially when it is wet from springs above or rainfall. This may be observed particularly well along SR 60.

Numerous wildflowers typical of southern Ohio woodlands are found in the hardwood forests. Its wilderness environment provides shelter for animals, seen and unseen. The area contains a lookout tower. A naturalist is on duty from mid-June to Labor Day.

Park Manager
Blue Rock State Park
Route 1, Blue Rock 43720
(614) 674-4794

Forest Ranger
Blue Rock State Forest
Route 1, Blue Rock 43720
(614) 674-4035

DILLON STATE PARK AND RESERVOIR AREA

6,675 acres

On SR 146 north of Zanesville

This reservoir was created by damming the Licking River a relatively short distance above its confluence with the Muskingum River. This was for a dual purpose: flood control and recreation. The park area lies in the section of the watershed beyond the glacial boundary. The reservoir, however, extends into Licking County to the Black Hand Gorge. (See description under that county and title.)

The unglaciated hills and valleys are scenic, much of the area in old fields with some substantial amounts of woodland in the ravines. Swamp land is abundant along the lake shore in places. A nature program is conducted from April to October. Park facilities are found on both sides of the winding lake. The Ruffed Grouse Self-Guiding Nature Trail is adjacent to the picnic area.

Park Manager
Dillon State Park
Route 1, Nashport 43830
(614) 453-4377

DONAHOE TREE FARM

260 acres

On SR 209, 8 miles west of Cambridge

For a study of timber planting and management, this is a valuable site. Four plantations of white and red pine each have 10,000 trees at various stages of growth ranging from six to ten years. A stand of hardwood trees of harvestable size occupies 39 acres. Still another plot of 100 acres has a crop of young hardwoods of various species.

American Saddle horses, a pedigree stock, are raised also by this farmer. His farm house is historically interesting in that it was built 137 years ago and uses spring water exclusively. The farm is situated on unglaciated rolling hills underlain by Pennsylvanian age sandstones, shales, coal, and limestone. Three producing gas wells may be observed.

Howard A. Donahoe
Route 2, New Concord 43762
(614) 826-4114

MUSKINGUM RIVER PARKWAY STATE PARK

(See also Morgan & Washington counties)

33 acres

Located along the Muskingum River

Small park areas have been established at the dams and locks along the river to provide easy access for observation. In Muskingum County these sites are at Philo and Zanesville on SR 60 and at Ellis on SR 60 to Co. Rd. 49. These are excellent for observing typical river bank vegetation, flood plain, terraces, and valley profiles as well as navigation procedures. Locks are open only during normal boating season.

Park Manager
Muskingum River Parkway State Park
P.O. Box 2806, Zanesville 43701
(614) 452-3820

OHIO POWER RECREATION AREA (CUMBERLAND MINE AREA)

(Also see Morgan County)

100,000 acres total

In Meigs Township along SR 284 and 340

A drive through the active strip mining and reclamation areas of this county provides an understanding of the pro-

cesses and problems of mining and recreation, a picture of the beautiful hill country prior to stripping, land which has had recent reclamation activity, and older, more effectively treated areas. The camp and picnic sites where access roads are available are found in Morgan County.

The Ohio Power Company
P.O. Box 328, McConnelsville 43756
(614) 962-2013

Division of Wildlife District 4 Office
360 East State Street, Athens 45701
(614) 593-6933

POWELSON STATE WILDLIFE AREA

2,696 acres

On SR 60, 7 miles north of Zanesville

This area offers the student of natural history an opportunity to evaluate reclamation efforts on strip mined land 25 years after mining. One-fifth of the land was denuded, then reforested with black locust and pine, reaching pole size at the present stage. Other parts are composed of grasslands, old fields, and upland woods in approximately equal amounts. The hilly, unglaciated terrain underlain by Pennsylvanian age rock strata has thin, acid soils. This is reflected in the vegetation. A wide variety of furbearers, quail, and grouse may be seen.

Division of Wildlife District 4 Office
360 East State Street, Athens 45701
(614) 593-6933

TILTING ACRES CAMP

103 acres

On the Muskingum River 6 miles east of Dresden on Twp. Rd. 50

Proximity to a strip mine area is not evident at this tucked away Girl Scout camp, which lends itself well to a day field trip for observing the relationships of river, rock strata, topography, vegetation, and animal life. Although the river is not used by the Scouts for canoeing or boating, trails lead along the flood plain with its typical lush vegetation, and up hillsides covered with a mature growth of mixed hardwood trees and ungrazed understory. Rock outcrops of Pennsylvanian age relate to the steep slopes carved out by a meltwater stream. Two camping units with tables provide study and picnic areas.

Camping Director
Heart of Ohio Girl Scout Council
1215 Newark Road, Zanesville 43701
(614) 454-8563

WILDWOOD

200 acres

On Twp. Rd. 202, 1 mile west of New Concord

A private campground has been developed on rolling hills underlain by the rock formations of middle Pennsylvanian age. The property lies almost in the trough of a syncline, a downward fold in the layers of rock due to stresses. On the west arm the Ames limestone, coals, and red shale are exposed; on the east, the Cambridge limestone and a different coal seam may be observed in road cuts or ravines. Fossil hunting in the area is rewarding. The soils are residual and generally acid.

The forest type, mixed oak with many species in association, and the shrubs and wildflowers reflect the soil and climatic conditions. Seventy-five percent of the area is forested, and five miles of hiking trails give access to the woodland and to four high overlooks.

Birds are abundant and mammals, including deer, may be seen. Two lakes provide water habitat, boating, fishing, and swimming. An attendant lives year-round on the premises. Charge may be negotiated on basis of size, age, and supervision of group.

Harry Mason
Route 1, New Concord 43762
(614) 826-4325

ZANESVILLE STATE NURSERY

206 acres

On SR 666, 6 miles north of Zanesville

The nursery is operated to obtain seeds and seedlings of a variety of species of pine. These are then distributed to various state properties for reforestation purposes. The pines are carefully managed and there are different age groups to observe. The property lies along the rich flood plain of the Muskingum River. Some hardwoods of the mixed oak forest group are also present.

Zanesville State Nursery
Gilbert Station, Route 5, Zanesville 43701
(614) 453-9472

ZANE TRACE SCHOOL FOREST

48 acres

On North Blue Ave., Zanesville

A school forest has been developed on this site, with 23 teaching stations and a forestry trail guide prepared to help teachers interpret the ecology to students at all levels of understanding. It begins on a knoll of hardwoods and proceeds through plantations of white pine, ending upstream on Joe's Run. Meandering streams, swamplands, contour strips, and a small orchard area add to the diversity of habitat. Further benefits to wildlife are plantings of multiflora rose.

Evidence of an Indian chipping area, den trees, bee areas, fire lanes, and experimental plantings may be observed also. An outdoor classroom seating 25 persons can be used. Additional seating for students has been provided for in three other areas as well. A "soil and water" trail and a wildlife trail are recent developments. September through November, and April through June are months recommended for field trips.

Zanesville High School
Zanesville 43701
(614) 453-0335

NOBLE COUNTY

BUCKEYE TRAIL

29 miles

From roadside park on SR 78 at Morgan County line, to roadside park near dam of Senecaville Lake

In Noble County the Buckeye Trail enters near Brown Knob, which has an elevation of 1,170 feet. It leaves the active strip mine area at that point and travels through farm and woodland. Many kinds of plants and animals reflect changing land and water patterns of the area. There are excellent panoramic views of the countryside from the knobs, as well as opportunities to observe the coal, limestone, shale, and sandstone in the cuts and rock walls.

The trail leads into Wolf Run State Park, where camping and other facilities are available. Oak, hickory, aspen, ash,

maples, and buckeye trees are found in unspoiled ravines going down to Wolf Run Lake. Wildflowers are plentiful. The farming acreage contained within the park is part of the Eastern Ohio Resource Development Center. (See description following.) Oil and gas wells are evident along much of the trail; the oldest oil well in the US is off the trail near Caldwell at the junction of SR 78 and 564.

Beautiful Senecaville Lake (largest in the Muskingum Watershed Conservancy District), two miles of woodland trail, a fire tower, and a roadside park are on the route as the trail enters Guernsey County. Maps and further information are available from:

Buckeye Trail Association, Inc.
P.O. Box 254, Worthington 43085

EASTERN OHIO RESOURCE DEVELOPMENT CENTER

2,000 acres

Unit I - east of I-77 interchange at Belle Valley
Unit II - 7 miles southeast of Caldwell

Centrally located in the Appalachian Plateau area of Ohio, both areas are on rolling hills thinly covered with light soils low in fertility. The center has been established in Noble County, because like others in eastern Ohio, it is a problem area with low returns on agricultural investment.

The first research site, Unit I, purchased in 1965, is on the shore of Wolf Run Lake. Unit II is situated south of Unit I and consists of 1,325 acres of heavily strip mined land. Here research is directed toward increasing fertility and finding plants that will grow on eroding wastelands.

Research on both properties is designed to find the best combinations of crops and livestock for profitable agricultural enterprises. Grapes, peaches, apples, and elderberries are grown on an experimental basis. Contour and no-tillage planting, to keep down erosion, may be observed. This is an excellent area to study ecology involving rock, soil, climate, natural vegetation, and the effects of man's use of the land for farming, extracting coal, and now reclamation.

Manager
EORDC
Route 6, Caldwell 43724
(614) 732-2682

FRONTIER VACATION LAND

1,000 acres

At the north limits of Dexter City on SR 821

Reclamation of strip mined land takes the form here of an extensive recreation project. A central "city" contains a large general store and housing units built to simulate an authentic western frontier town. A large stable houses more than 30 riding horses. A great many acres have been developed for camping sites and picnic grounds, but there are also hundreds of acres of reclaimed and natural wooded land, ponds for fishing, and high walls of Permian-topped rock formations. Riding and hiking trails wind among the trees, the ponds and the rough terrain.

A field trip to observe the total reclamation project or a series of visits for research projects can be arranged.

Manager
Buffalo Valley Ranch, Inc.
Box 77, Dexter City 45727
(614) 783-2675

OHIO POWER RECREATION AREA (CUMBERLAND MINE AREA)

100,000 acres total

In Brookfield Twp., northwest part of county along SR 83, 340, and 215

This extensive section of strip mine country in Noble County contains two very intensively mined and reclaimed areas, with many lakes, ponds, and plantations of woodland, some private farms, a long stretch of the Muskingum Electric Railroad, two restricted sites where active mining is being done, and two parksites.

SR 83 south leads to the Brookfield parksite, which contains an information center, picnic facilities, pine plantation, small tree forest with a few large oaks, two planted bald cypress trees, rock exposures nearby, and a spur of the electric railroad which permanently displays an electric locomotive and cars.

A trip on down SR 83 shows the reclaimed land in several stages of development, the best of which appears to be quite comparable to the untouched farmlands. Another parksite, Hunter's Cut, is on SR 340 in a heavily wooded area. Permits are required and maps are available.

Ohio Power Company
P.O. Box 328, McConnelsville 43756
(614) 962-4525

Division of Wildlife District 4 Office
360 East State Street, Athens 45701
(614) 593-6933

PINE LAKE CONSERVATIVE BAPTIST CAMP

78 acres

Off SR 821, 3 miles south of Caldwell

A delightful mansion situated on a hill and surrounded by a pine plantation and a three-acre lake provides the central setting for this church retreat. But back of the hills are natural woodland, cabins, and an assembly building overlooking the countryside. Nature trails lead through the woodland and red pines, where many species of trees, wildflowers, and birds may be studied.

The camp has the added advantage of being located within a few miles of the southern part of the Eastern Ohio Resource Development Center, which lies in heavily strip mined land. Here research projects concerning the ecology of rock, soil, climate, vegetation, and man's use of land can be conducted under the supervision of an experienced staff.

Rev. Gilbert L. Purtee
P.O. Box 467, Wheelersburg 45694
(614) 574-5360

SENECAVILLE LAKE

Land - 3,610 acres Water - 3,550 acres

On SR 574, 147 and 313 in the north-central part of county

The major part of this beautiful lake, built by impounding the water of the Seneca Fork of Wills Creek, lies in Noble County. The largest of the Muskingum Watershed Conservancy District reservoirs, covering 3,550 acres, it winds its way around rolling hills with miles of shoreline to provide study areas for aquatic plants and animals.

In addition, mixed oak hardwood forest remnants with shrubby ravines contain many kinds of trees and herbaceous plants, wildflowers, birds, and Permian age rocks. Beatty Knob, with an elevation of 1,220 feet, and a fire tower are at the south end of the lake.

The Buckeye Trail may be followed for two miles along the western side through delightful woodland. A roadside park, providing necessary conveniences, is at the dam site.

Manager
Senecaville Lake
Box 146, Senecaville 43780
(614) 827-3325

WOLF RUN STATE PARK

1,266 acres

East of I-77 off SR 215 near Belle Valley

Wolf Run Lake, a shining jewel nestled among the rounded hills, is surrounded by abandoned farm fields, an oak-hickory forest with many other trees and shrubs, and land being used by the Eastern Ohio Resource Development Center.

The park area is on the hilltops and gives a panoramic view of the countryside for miles around. A long ravine, wooded with mixed hardwoods, predominantly oak and hickory, leads down to the lake. The road to the boat ramp has a cut containing a coal bed and other rock formations typical of the area. An interpretive naturalist is available during the summer.

Park Manager
Wolf Run State Park
Route 6, Caldwell 43724
(614) 732-5035

OTTAWA COUNTY

CAMP PLYMOUTH SHORE

5 acres

On SR 135 at Englebeck Rd.

This is a private girls' camp specializing in water-related activities and riding. The lake shore offers a good study area for aquatic vegetation, wind and wave action, fossiliferous limestone rocks, and glacial deposits.

The woodland contains elm, cottonwood, silver poplar, horsechestnut, spruce, cedar, and wildflowers in spring. School camping or day outings can be arranged.

Le Roy Higley
8010 East Bay Shore, Marblehead 43440
(419) 734-3524

CAMP SABROSKE
110 acres

Along Toussaint River and Parker Creek on Twp. Rd. 62

This church retreat, across the river from the Toussaint State Wildlife Area, contains uncommon trees such as English walnut and almond as well as others typical of the elm-ash-swamp forest. Many varieties of birds, small mammals, wildflowers, and marsh flora may be studied. A winterized lodge, boats and canoes may be used in the spring and fall except during duck season. There is no charge for field trips only.

Charles W. Smith
Route 3, Oak Harbor 43449
(419) 898-6741

CAMP YUKITA
35 acres

On NW Catawba Rd., west on Lake Erie

With its lake shore, lagoon, woodland, and field, this camp has much to offer for outdoor education. The three-acre wooded area is primarily in trees typical of moist habitat, such as willow and cottonwood. The underlying rocks are the thin-bedded dolomites of the Tymochtee member of the Monroe group, late Silurian in age. A partially winterized lodge and cabins provide living quarters.

Camp Director
Camp Yukita
409 South Arch Street, Fremont 43420
(419) 332-8641

CATAWBA ISLAND STATE PARK
10 acres

On SR 53 and 357

This small site on the tip of the peninsula in Lake Erie serves primarily as a boat launch facility and picnicking site. There are no significant flora due to limited acreage and extensive use.

Park Manager
Catawba Island State Park
4049 East Moores Dock Road, Port Clinton 43452
(419) 797-4530

CRYSTAL CAVE
1 acre

On South Bass Island

Known to geologists as the "Immense Geode," this cave has its interior completely covered with a mass of the dazzling mineral celestite (strontium sulphate). The sidewalls are of solid material; the ceilings are arch shaped and hung with crystals. The crystals are prismatic; the angles of each of the crystal faces are exactly alike.

Strontium sulphate is a heavy mineral, often white with a bluish tint, and is usually associated with limestone as it is in this cavity. The deposit is reported to be the biggest in the U.S., and contains the largest crystals, some being 18 inches in length. School groups may visit from May 20th through Labor Day.

Louis V. Heineman
Put-in-Bay 43456
(419) 285-2811

EAST HARBOR STATE PARK
1,613 acres

On SR 163 and 269, east of Port Clinton

The park's long sand beach, extending for 2½ miles, is considered one of the finest along Lake Erie. Excellent aquatic vegetation can be found on the shore and bays. Shorebirds and waterfowl may be studied during migration.

There is typical emergent natural vegetation, but most of the trees occur in open parklike areas. A nature interpretation program is conducted during the summer.

Park Manager
East Harbor State Park
1169 North Buck Road, Lakeside-Marblehead 43440
(419) 734-4424

LAKESIDE
10 acres

On SR 163 on Marblehead Peninsula

Winterized lodging and food service for as many as 100 persons are attractive features of this Methodist church campground. Although the town of Lakeside is heavily populated, especially during the summer months, this facility might be advantageous as a home base for hikes and field trips into adjacent or nearby areas.

The peninsula is a rock ridge over which the glaciers passed but left only a thin coat of drift. It is underlain by the Columbus limestone, which is highly fossiliferous. It has been quarried extensively and the lands are now returning to a natural state. Waterfowl and shorebirds are found on the lake; songbirds in the woods and along the shore. A delightful little lighthouse may be visited.

Manager
The Lakeside Association
236 Walnut Street, Lakeside 43440
(419) 798-2111

LITTLE PORTAGE STATE WILDLIFE AREA
357 acres

On SR 53, 5 miles west of Port Clinton

This area is a combination of river marsh and low-lying agricultural ground, a portion of which has been diked for water level control. The area is bounded by the Portage and the Little Portage rivers. It lies on the flat, glaciated Lake

Plain, on the silts and clays which were deposited in an earlier Lake Erie.

Waterfowl and shorebirds of many varieties can be found during spring and fall migrations. Wood duck, mallard, and blue-wing teal nest here. The fish species include carp, channel catfish, bullhead, and crappie. A boat launching ramp and other facilities are present.

Division of Wildlife District 2 Office
952 Lima Avenue, Findlay 45840
(419) 422-6757

MAGEE MARSH STATE WILDLIFE AREA AND CRANE CREEK WILDLIFE EXPERIMENT STATION

2,600 acres

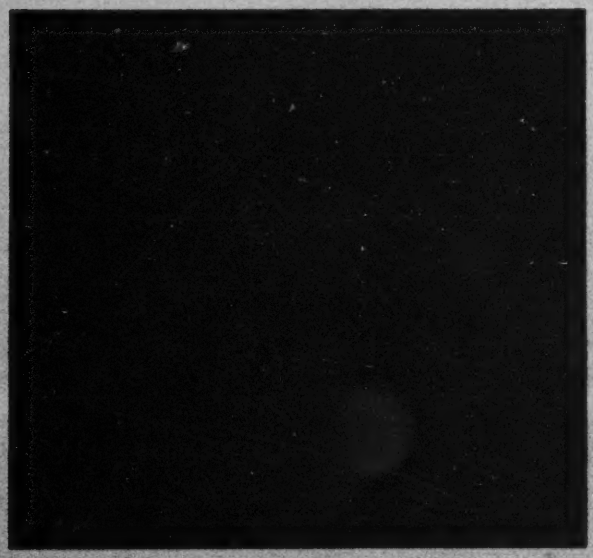
On SR 19 and 2, 10 miles north of Oak Harbor

The Lake Erie marshes have been famous for 75 years as some of the best waterfowl hunting and observation areas in the nation. Magee Marsh, purchased by the state in 1951, has two basic functions: wildlife research and management and controlled, hunting-by-permit waterfowling.

The Crane Creek Wildlife Experiment Station is responsible for statewide waterfowl research and management, marsh management, wetlands habitat development, and studies involving furbearing animals.

Canada goose, mallard, blue-winged teal, wood duck, and smaller numbers of other waterfowl nest here. But the number and large variety of migrating waterfowl is amazing. State biologists have reported concentrations exceeding 100,000 birds in this general area for brief periods. Flocks of migrating whistling swans, peaking at 5,000 birds, appear in March. Warbler concentrations during migration are reported to be among the best in the state. Bitterns, herons, and a wide variety of shorebirds are common to the area.

A bird nature trail as well as dikes for hiking facilitate seeing the wildlife. They are reached from the Turtle Creek Fishing access, where parking space is provided. A full-time naturalist is available, and maps may be requested. A two-story structure known as the Sportsmen Migratory Bird Center houses a number of interesting displays.



Magee Marsh is adjacent to the Ottawa National Wildlife Refuge. Crane Creek State Park, a narrow strip of land between Magee Marsh and Lake Erie, provides varied facilities.

Supervisor
Crane Creek Wildlife Experiment Station
Route 3, Oak Harbor 43449
(419) 897-2523

OTTAWA, CEDAR POINT, AND WEST SISTER ISLAND NATIONAL WILDLIFE REFUGES

8,000 acres (total)

Borders Lake Erie off SR 2, midway between Toledo and Port Clinton. West Sister Island lies 18 miles southwest of Port Clinton

These three refuges are the only national wildlife refuges in Ohio. All three are administered from the 4,800-acre Ottawa National Wildlife Refuge, which adjoins Crane Creek State Park and Magee Marsh State Wildlife Area.

Crane Creek flows through the Ottawa refuge, which also contains diked marshes adjoining farmlands and woodlots. It is one of the few bald eagle nesting sites left on the Great Lakes. Over 288 species of birds have been found on the Ottawa refuge, along with a variety of mammals, reptiles, and insects. Management is directed toward providing food and resting areas for migrating waterfowl. Over 25,000 Canada geese and 50,000 ducks may be present at one time during the fall migration. In March, during the spring migration, flocks of as many as 2,000 whistling swans are not uncommon.

During the summer months at the Ottawa refuge, the visitor may view tranquil scenes including colorful blooming aquatic plants, herons and egrets feeding in the marsh, and the nesting activities of more than 1,500 Canada geese. The Blue Heron Trail, a self-guiding nature trail, is open to groups or individuals during daylight hours, seven days a week, throughout the year. Six miles of trail in this system pass through most of the habitat types. A variety of sites are available for environmental studies by classes of all ages.

The nearby 489-acre Darby Marsh is a part of Ottawa National Wildlife Refuge, which also manages another waterfowl area in the vicinity, the 533-acre Navarre Marsh, under an agreement with the owner.

Cedar Point National Wildlife Refuge is a 2,245-acre marsh located six miles west of Ottawa in Lucas County. This "historical point" demarks Maumee Bay from Lake Erie. President Eisenhower is reported to have duck hunted here on occasion prior to its donation as a national wildlife refuge.

West Sister Island National Wildlife Refuge, a proposed 82-acre wilderness area, was established in 1938. Limestone

cliffs, hackberry woodland and marshland shelter great blue and black-crowned night herons as well as the only colony of great egrets in Ohio. Protection against human disturbance is the principal management proposed for this area.

The great variety of habitats, the tremendous number of birds, the controlled and natural marsh and the ravages of a periodically turbulent lake make these refuges great assets for educational and research purposes.

Refuge Manager
Ottawa National Wildlife Refuge
14000 West State Route 2, Oak Harbor 43449
(419) 897-0211
Office Hours: 8 a.m. to 4:30 p.m., Monday through Friday

PERRY'S CAVE

10 acres

At Put-in-Bay on South Bass Island

The discovery of this cave is credited to Commodore Perry, hero of the battle of Lake Erie, while his squadron lay at anchor in the bay a few days prior to the battle. Tradition claims that Perry stored ammunition and cannon in the cave and kept British prisoners there.

The cave is 52 feet below the surface; it is 208 feet long and 165 feet wide. It is heavily encrusted with precipitated calcium carbonate which was deposited by the evaporation of dissolved limestone water as it dripped from the ceiling. Of wide fame is the wishing well, a pool within the cave that rises and falls with the level of Lake Erie.

The property above ground has a variety of trees, wildflowers, birds, and small animals. Fossiliferous limestone is exposed also.

Tours extend from May 30th to Labor Day.

Perry Cave, Inc.
Put-in-Bay 43456
(419) 285-3496

SOUTH BASS ISLAND STATE PARK

32 acres

On Lake Erie north of Marblehead Peninsula

This delightful state property can be reached only by ferry or plane from Lakeside or Sandusky. A field trip here is for the adventuresome teacher and class.

The park is situated on limestone cliffs with excellent exposure on a rugged shoreline. The area is predominantly an oak-maple woods with associated wildflowers, birds, and small mammals. The remains of glacial grooves can be found, although those on Kelleys Island are deeper and longer.

This island contains the famous Perry's Memorial and Perry's and Crystal caves.

Park Manager
South Bass Island State Park
4049 East Moores Dock Road, Port Clinton 43452
(419) 797-4530

STONE LABORATORY

10 acres

On Gibraltar Island opposite the Village of Put-in-Bay on South Bass Island

Since 1896 Stone Laboratory has provided continuous training and research opportunities through the College of Biological Sciences at the Ohio State University for graduate and undergraduate biological science students and teachers.

The summer programs stress applied field studies in aquatic ecology and environmental biology. The 13 courses are designed to take advantage of the unique location on an island in western Lake Erie. The rocky shores, the extensive spawning reefs and shoals, the deep water environments, the sand spits, barrier beaches, and marshes provide diversified habitats for individual and group research problems.

Instruction will include environmental problems in the Lake Erie area—the two nuclear power plants, the fishing fleets, the shoreline dramatically altered by the erosive effects of record-high water levels, and many other challenging aspects of the lake environment.

The island is reached by air or ferry from Catawba Point. Dormitories for men and women and for married students without children are provided. Reservation for enrollment in courses should be made by May 1 or earlier.

Director
Franz Theodore Stone Laboratory
Put-in-Bay 43456
(419) 285-4754

The Ohio State University
484 West 12th Avenue, Room 112, Columbus 43210
(614) 422-8949

TOUSSAINT STATE WILDLIFE AREA

236 acres

2 miles south of SR 2

This area is a combination of marsh and low-lying farmland, diked for water level control. Approximately 1¼ miles of Toussaint Creek shoreline bound the property. Fish, migrating waterfowl, and shorebirds constitute the animal life. A wide variety of marsh flora may be observed.

Division of Wildlife District 2 Office
952 Lime Avenue, Findlay 45840
(419) 422-6757

PAULDING COUNTY

PAULDING PONDS

51 acres

Off Co. Rd. 107, near fairgrounds

An impounded portion of Flat Rock Creek, a tributary of the Auglaize River, and three ponds justify the name of this area. It lies on the glaciated, flat Lake Plain typical of western Ohio, with underlying rock of the Tymochtee member of the Monroe dolomite group. The soils are dominantly clay and poorly drained.

The ponds contain various types of aquatic vegetation and associated aquatic organisms. A diverse fish population, seasonally migrating waterfowl, pheasant, quail, and small mammals may be observed.

Division of Wildlife District 2 Office
952 Lima Avenue, Findlay 45840
(419) 422-6757

PERRY COUNTY

CLOUSE LAKE STATE WILDLIFE AREA

93 acres

On SR 668, 3 miles south of Somerset

Dipping down a hill, one comes suddenly upon this choice little lake with a picnic site conveniently near the highway. The 41-acre lake contains an excellent fish population. A limited number of waterfowl may be observed in early spring migration. The marginal land consists of pine plantations interspersed with hardwoods of beech, maple, and hickory.

Division of Wildlife District 4 Office
360 East State Street, Athens 45701
(614) 593-6933

PERRY STATE RECLAMATION AREA

4,400 acres

North of New Lexington in the vicinity of Rehobeth

This heavily stripped area has been purchased by the State of Ohio for the purpose of reclamation, research, and recreation. Interspersed among the bare or recently contoured and planted surface mined locations are parcels of woodland in the typical oak-hickory association. These are found in ravines and on islands, some accessible, which could not be mined economically. Thirty-five acres of severely eroded, strip mined areas were successfully converted to gently rolling grassland. Numerous plots of black locust trees and other experimental planting projects have been established.

The acreage encompasses two watersheds: Little Rush Creek drains most of the crest and southwest of the divide in the Hocking River watersheds; a smaller segment is a part of the Muskingum River drainage system. Twelve-acre Essington Lake in the center and numerous ponds remain as a result of mining, some red with acid water where even mosquitoes pass quickly by, a few successfully stocked with fish.

Haul roads and township roads have been improved for access to the region. Highwalls showing the cyclothem of coal, limestone, shale and sandstone typical of coal regions are within easy walking distance from the roads. A trail system has been developed beginning at the south side of the area.

Eleven-hundred acres have been set aside as an all-purpose vehicle (APV) area, one of the four in the state.

The vast acreage lends itself well to ecological experimental plot plantings, chemical testing of water, comparisons of stripped and natural woodland, and numerous other studies. An exploratory hike is advisable.

Facilities are limited, but one ranger station with an acting manager is on the area. In addition to caution in examining the high walls, visitors are advised that some soft drainage areas are dangerous. Many of these are marked as a warning.

Division of Forestry District 4 Office
360 East State Street, Athens 45701
(614) 593-6933

PICKAWAY COUNTY

CIRCLEVILLE CANAL

35 acres

One mile south of US 22, west of Circleville

This site has historic interest in that it is a five-mile portion of the Portsmouth-Lake Erie Canal which has been impounded at the south end. A towpath trail gives access to study various aquatic plants and animals as well as succession plants along the old canal. The waters are stocked with bass, bluegill, and crappie.

Division of Wildlife District 1 Office
1500 Dublin Road, Columbus 43212
(614) 466-3337

DEER CREEK STATE PARK

9,307 acres

South of Mt. Sterling on SR 207

Recently acquired from the Corps of Engineers, Deer Creek is little developed at the present time. The largest area of the park is primarily open farmland in natural succession with some wooded ravines and a ridge known as Tick Ridge.

The area lies on a thick glacial till plain dissected by Deer Creek, a tributary of the Scioto River. The stream has a profile of cutbanks, alluvial plains, and outwash deposits typical of glaciated areas.

No trails have been developed but Tick Ridge and picnic facilities are close to the dam site. The 1,277-acre lake is open for boating and fishing. In addition to more facilities, plans call for reforestation to augment the young hardwood woodlots already there. An interpretive naturalist is available during the summer.

Park Manager
Deer Creek State Park
Route 1, Mt. Sterling 43143
(614) 869-3124

A.W. MARION STATE PARK

412 acres

Off US 22, east of Circleville

The park area lies on glaciated land which has thick deposits of till. The topography is gently rolling; a good beech-maple woodland and old fields in natural succession provide habitat for wildflowers, birds, and small mammals. Squawroot Nature Trail, a one-mile-long self-guiding nature trail, is adjacent to the campground.

A dam on Hargus Creek, a tributary of the Scioto River, creates a picturesque little lake of 145 acres. Waterfowl are seen on the lake during migration.

A large glacial erratic with a bronze plaque dedicates the park to the memory of A.W. Marion, Ohio's first Natural Resources director.

Park Manager
A.W. Marion State Park
Route 2, Circleville 43113
(614) 474-3386

PIKE COUNTY

BUCKEYE TRAIL

43 miles

From the Highland County line at Cynthiana to the roadside park on US 23

The blue blazes of the Buckeye Trail cross rugged country where the Allegheny Plateau begins and streams have highly eroded through the resistant sandstone formations. The trail goes through Baker Fork gorge and past the boundary of glaciation of Cynthiana. Its pathway keeps to the northern part of the county over hilly, wooded terrain to Pike State Forest, Pike Lake, and Pike Lake State Park. Deer, wild turkey, and grouse may be seen en route.

At the park are a museum shelter, campground, and picnic facilities. From there the trail cuts up to Nipgen in Ross County, then skirts the edges of both counties along little-used roads, leaving Pike County at US 23 as it proceeds north. Many historical sites may be seen, among them a German cemetery. For maps and further information contact:

Buckeye Trail Association, Inc.
P.O. Box 254, Worthington 43085

CAVE LAKE PARK

300 acres

Off SR 124, southeast of Sinking Springs

Designed for use which will permit natural features to remain natural, this park seems to show that the two goals are compatible. One natural attraction is a large cave with its entrance near the lake, which in itself is an outstanding feature. Covering 40 acres, the lake is surrounded with natural forest and a pine and cedar grove. The extensive woodland is oak-sugar maple forest type with many species in the association. Unusual flowers, ferns, and songbirds may be studied from the hiking trails. Deer and wild turkey are reported to be in the area.

The area is beyond the boundary of glaciation; the hills are capped with sandstone. The streams have eroded through to the Ohio shale below. Groups may hike through the park free of charge.

Manager
Cave Lake Park
Route 4, Hillsboro 45133
(513) 588-2752

KINCAID SPRINGS STATE FISH HATCHERY

Land - 213 acres Water - 11.5 acres

On SR 124, east of Sinking Springs

Springs are common in this region where the hills are capped with the sandstones of early Mississippian age and the streams have eroded through the Ohio shale below, exposing the Silurian dolomite formations.

The Kincaid spring, where this hatchery and fish farm are located, is one of the finest in the state. The source of the water is probably the porous Niagara. This spring has an average flow of 1,900 gallons per minute and an average water temperature of 52 degrees, fluctuating only about nine degrees during a year.

The name of the hatchery originates from John Kincaid, one of the first migrants, who settled near the spring in 1797, after the Revolutionary War. The facility has been operated by the Division of Wildlife since 1935. It was primarily a bass farm until 1953, when muskellunge were successfully hatched artificially. Production has increased steadily ever since. At present, a cold water species, rainbow trout, is successfully being reared. In addition to the spring and the fish production process, waterfowl and songbirds may be observed.

Superintendent
Kincaid Springs State Fish Hatchery
Latham 45646
(614) 493-5063

LAKE WHITE STATE PARK

328 acres

On SR 104 and 551, 2 miles south of Waverly

The twisted 304-acre Lake White was formed by impounding the waters of Peepee Creek almost at its confluence with the Scioto River. The area is beyond the boundary of glaciation although the Scioto valley was filled with sand and gravel outwash from the glacial meltwater river. The streams have cut through the Ohio shale, and the hillsides reflect the typical erosion pattern of this rock formation.

The area is rich in the history of pioneer days. Peepee Creek was named by settlers who discovered the letters "PP" cut into a large beech tree near the present site of the dam. A Pennsylvania frontiersman named Peter Patrick had traveled up the Scioto to this spot and marked the tree, thus establishing it as a boundary of his land claim. An Indian attack as he and his party returned to an Ohio River settlement prevented him from ever occupying his designated land.

Only a small land area surrounds Lake White and there is little natural vegetation. A combined study of the history and ecology of the area might prove to be very interesting.

The park has many camp and picnic sites located on the hillside overlooking the lake.

Park Manager
Lake White State Park
Box 130A, Route 2, Waverly 45690
(614) 947-4059

OVERLOOK HILLS FARM

650 acres

On Schmidt Rd. and Potts Hill Rd., 4 miles south of Bainbridge, 2 miles from Pike Lake

This rolling country estate contains a tree farm certified by the American Forest Institute. It is also managed as a conservation cropland farm and a vacation farm. It is situated near Pike Lake and many other points of interest, but its own natural environment makes for a worthwhile educational hike or a peaceful vacation. The hiking trails lead to an Indian campsite, sandstone cliffs, hidden springs, a ravine waterfall, five farm ponds stocked with fish, a sugar bush, and a 450-acre tract of timber demonstrating forest management. Ferns and wildflowers in the ravines and big woods are abundant. Here, too, are found squirrel, rabbit, grouse, quail, and some deer and wild turkey.

A large farm house with modern conveniences, a four-room cabin on the hill, and a pond with beach for swimming are available. There is no charge for a field trip.

Prof. John V. Schmidt
5778 Autumn Hill Court, Columbus 43220
(614) 451-9641

Edward Schmidt, Manager
Overlook Hills Farm
Bainbridge 45612
(614) 634-2863

PIKE STATE FOREST AND PIKE LAKE STATE PARK

Forest - 10,586 acres Park - 500 acres

Between US 50 south of Bainbridge and SR 124 west of Piketon

This extensive forest in the northwest part of the county was established in 1924 with the objective of returning abused and fire damaged timberland to productive forest. It is situated on hilly terrain just beyond the boundary of glaciation. The sandstone which tops the hill belongs to the Waverly group of Mississippian age. The streams have eroded through to the Devonian age Ohio shale below. The oak-hickory forest type and associated shrubs and wildflowers cover the south-facing slopes; north slope vegetation is mixed mesophytic with beech, white basswood, and tuliptree in the association. A fire tower is accessible.

The state park, including a 13-acre lake, is on the northeast corner of the forest. Hiking trails have been developed around the lake and into the woodland where the trees and abundant wildflowers may be seen. A nature program is conducted during the summer months and a wildlife display is also open during the summer.

Park Manager
Pike Lake State Park
Route 2, Bainbridge 45612
(614) 493-4201

Forest Ranger
Pike State Forest
Star Route, Latham 45646
(614) 493-4041

PORTAGE COUNTY

BUCKEYE TRAIL

38 miles

From Wingfoot Lake to LaDue Reservoir

The blue blazes of the trail in this county are found on country roads. The area is heavily glaciated and underlain by the sandstones, shales, and limestones of Pennsylvanian age. Evidence of the great kame belt, a broad band of silt, sand, and gravel deposited in depressions of the wasting glacier, may be seen along Mogadore Reservoir. The Kent end moraine of the Wisconsinan ice sheet is crossed en route to West Branch State Park, east of Ravenna. The trail turns north to the Geauga County line after making a loop through a lovely wooded area at the park. Facilities are available at the park. For maps and further information contact:

Buckeye Trail Association, Inc.
P.O. Box 254, Worthington 43085

CAMP ASBURY

305 acres

On Asbury Rd., south of Hiram

Camp Asbury possesses a wealth of potential outdoor education opportunities as well as excellent winterized facilities. The site lies on glaciated, rolling, and dissected Allegheny Plateau. The Sharon conglomerate lies beneath a thin layer of glacial till. Eagle Creek, a tributary of the Mahoning River, runs through the area, making interesting ravines with intermittent streams flowing over falls. A large swamp and an old mill pond add to the aquatic habitat.

Most of the area is wooded, the trees in various stages of growth. Beech, maple, and wild cherry are dominant. About 15 acres of conifers at least 20 years old provide good birding. Wildflowers are abundant in season and woodland animals are numerous. Kame deposits of sand and gravel on the property include a working pit. An old maple sugar bush is present. A four-acre pond and open fields in natural succession complete the types of habitats.

Three lodges and numerous cabins furnish eating and sleeping accommodations.

Manager
Camp Asbury
10777 Asbury Road, Hiram 44234
(216) 569-3171

CAMP CARL

240 acres

Off SR 14, south of West Branch State Park

Rolling meadows and broad athletic fields at this camp provide a sense of open space. Tucked behind a large lodge is a wooded ravine with a stream which is blocked to form a five-acre lake. Cabins are scattered through the woods near the lake; the forested area extends beyond, covering many acres. Hiking and riding trails give access to all parts of the property.

Rev. Arch Rutherford
The Chapel in University Park
135 Fir Hill, Akron 44304
(216) 678-8800
(216) 535-7101

CAMP HI

53 acres

On Abbott Rd., north of SR 82 west of Hiram

A large wooded area and an exceptionally fine waterfront on the Cuyahoga River are natural highlights of this camp. It lies on the glaciated and rolling Allegheny Plateau at the highest spot in the county. The area is dissected by the river and its tributaries. The camp trails and program also make use of a large acreage adjoining. The region is underlain with the Sharon conglomerate, the basal member of the Pennsylvanian period of Devonian age rocks. Five springs and two creeks add to the river for aquatic habitat.

A camp farm provides studies in agricultural methods and animals. Riding horses and canoes are available for "unusual" field trips. The heated lodges and sleeping cabins are beautifully situated in the mixed oak woodland and are available from April 15 to November 1.

Manager
Camp HI
3599 Randolph Road, Cleveland Heights 44121
(216) 381-5259
(216) 569-7621

CENTERVILLE MILLS YMCA CAMP

300 acres

On SR 306, north of Aurora

Rich in legend, geologic history, and varieties of habitat, this camp has much of educational value to offer. Centerville Mills, erased by the 1913 flood, was an imposing structure built on the rock floor of the Chagrin River near its headwaters. The rock exposed in the bank of the stream and the waterfall are the Meadville shale of Mississippian age and the Sharon formation which marks the beginning of Pennsylvanian age rocks.

The valley through which the river flows was eroded by great volumes of meltwater from the wasting glacier. Because of the cool, moist climate in the valley, some species of glacial vegetation, such as hemlock, have survived. The 300 acres of woodland are in the beech-maple forest type, with many wildflowers, shrubs, birds, and small mammals

seeking food and shelter there. A 20-acre lake provides habitat for water plants and animals.

The camp has facilities for school camping as well as field trips.

Manager
Centerville Mills YMCA Camp
Cleveland YMCA
2200 Prospect, Cleveland 44115
(216) 771-9900

GARRETTSVILLE OUTDOOR AREA

4 acres

Behind Garfield High School

A bird blind and nature trail are the first projects being built by the conservation classes toward the development of their outdoor education area. The wooded area was originally beech-maple forest but now has many different species of trees and understory woody plants. In addition there is a wildflower area.

The soil is typical low lime, difficult to drain, derived from glacial till. The land lies on the edge of the Defiance end moraine. A field growing by natural vegetative succession provides a plot study program which can extend many years.

Don Rowinsky
Garfield High School
Garrettsville 44231
(216) 527-4341

NELSON-KENNEDY LEDGES STATE PARK

167 acres

On SR 282 northeast of Garrettsville

The outstanding feature of this park is its prominent outcrops of Sharon conglomerate. This is the basal member of the Pennsylvanian system deposited on or near the shores of a broad shallow sea on a land surface which had been eroded for a long period of time. The region then subsided and was covered again by the sea. Subsequently uplifted, the rock layers have been eroded for some 300 million years. This part of Ohio was covered by ice sheets, the last of which wasted back 10,000 or more years ago. The glacier-fed streams contributed greatly to the exposure of the Sharon member; the scenic overlooks and bluffs are a result of the resistance of the formation to weathering and erosion.

Vegetation in the park is primarily beech-maple climax forest, although mountain maple, yew, and yellow birch are present along with a rich display of wildflowers in season.

A self-guiding hiking trail brochure contributes to the value of the site for field trips.

Park Manager
Nelson-Kennedy Ledges State Park
Route 2, Garrettsville 44231
(216) 548-5085

TINKERS CREEK STATE PARK

1,086 acres

Off I-80, west of SR 43 near Aurora

This area offers a good combination of several differing ecosystems and habitats, including upland, woodlot, old field, and swamp-marshland. Approximately 400 acres of the area is swampland. This portion contains a multitude of marsh and aquatic plant species which provide both food and shelter for thousands of waterfowl during the spring and fall migration periods. There are good populations of mallards and wood ducks, which nest on the area each spring. In addition, the marsh area provides excellent habitat for above-average numbers of muskrat, mink, and other aquatic fur-bearing mammals, plus such birds as woodcock, rail, gallinule, snipe, heron, and bittern. Due to the abundant terrestrial vegetation, there are also numerous rabbits, grouse, squirrels, and deer on the area.

Another unusual feature is the cool, pure artesian water from wells which have been flowing continuously for more than 15 years. These wells supply the water for seven ponds totaling about nine acres of water. The ponds support an excellent fish population and attract large numbers of migratory waterfowl and game birds.

The combination of abundant aquatic and terrestrial vegetation and above-average numbers of birds and animals have provided an area which is visited regularly by biology classes from nearby universities and high schools. Many amateur ornithologists and naturalists also presently utilize the area.

Park Manager
Tinkers Creek State Park
Box 178, Newbury 44065
(216) 564-2279

WEST BRANCH STATE PARK

8,002 acres

On SR 5 east of Ravenna

West Branch Reservoir, comprising 2,650 acres of the large park, was created by placing a long earth-fill dam across the tributary of the Mahoning River. The area is largely old abandoned farm fields interspersed with woodlands of the beech-maple forest type. The region has been glaciated and its topography is gently rolling. It is underlain by the Sharon conglomerate member of the Pennsylvanian system of rock formations. The soils are dominantly acid.

Swamp areas at the edges as well as woodland and field habitats are available for study. The services of a naturalist are available in the summer only.

Park Manager
West Branch State Park
5708 Esworthy Road
Route 5, Ravenna 44266
(216) 296-3239

PREBLE COUNTY

CAMP MYRON KAHN

86 acres

On Swan-Beatty Rd., 3 miles south of Camden

This Boy Scout camp is situated on glaciated land underlain by the hard limestones and dense shales of the Richmond formation, strata of Silurian age. A creek running through the camp has eroded through the glacial deposits showing exposures of fossiliferous rock.

Forty acres of woodland contain many trees native to Ohio – maple, oak, elm, sycamore, tulip, wild cherry, buckeye, ironwood, poplar, and others. Wildflowers are abundant; birds are common at certain seasons; small animals are present. Good habitat for aquatic plants and animals is provided by both the creek and a small lake.

Hiking trails extend into the forest. There is a large lodge which is not winterized.

Camp Director
Dan Beard Council, Boy Scouts of America
3007 Vernon Place, Cincinnati 45219
(513) 961-2336

FORT ST. CLAIR STATE MEMORIAL

89 acres

On SR 122 and 355, 1 mile west of Eaton

Fort St. Clair was built in 1792, one of a line of small supply forts which served as an American military lifeline established to win the Northwest Territory from Indian and British control. To the west of the fort site is a very large tree, known as the "Whispering Oak." Legend has it that the rustling leaves tell the story of the men who died there. A bronze tablet on a glacial erratic relates the story of the site in a different way.

A nature preserve lies at the west end of the area. It consists of 12 acres forested by beech, maple, and red elm together with a profusion of wildflowers and undergrowth. It was given by the Preble County Historical Society as an example of the forests which covered the area when the fort was built. A small stream meanders through the property; glacial rocks large and small are in and along it. Agricultural land lies on one side and a conifer plantation is seen from the roadway.

Facilities are well situated, some of them beside rock exposures of the Niagara dolomite of Silurian age.

Manager
Fort St. Clair State Memorial
Route 3, Eaton 45320
(513) 456-2353

IMES PARK

78 acres

On the Eaton-Lewisburg Rd., one-half mile south of I-70 via SR 503

This small, picturesque park, which has been in existence for 50 years, contains much of interest. The stream has eroded through the covering of glacial till, exposing the resistant dolomite rocks, and forming a waterfall here as in many other places along the Niagara escarpment. The soils are high lime in content and support the typical vegetation. Trees are of the beech-maple forest type.

Reese Centers
6588 Eaton-Lewisburg Road, Lewisburg 45338
(513) 962-2710

RUSH RUN STATE WILDLIFE AREA

1,183 acres

On Co. Rd. Northern, 5 miles southeast of Camden

Rush Run, the process of glaciation, and Ordovician rock strata combine to create an environment rich in natural history. Fossils are found in the rock formations exposed in road cuts and in the bed of the creek. Upland areas are wooded primarily in oak, hickory, and beech.

Rabbit, pheasant, quail, squirrel, and other upland game species are present. Several small ponds provide habitat for fur animals, fish, and waterfowl during the spring and fall migration. A 54-acre lake has been developed recently, the trees and brush left in to provide a preferred habitat for waterfowl and fish. Many aquatic and flood plain plants may be studied.

Area Manager
Rush Run State Wildlife Area
1889 Northern Road, Somerville 45064
(513) 726-6795

WOODLAND TRAILS SCOUT RESERVATION

2,000 acres

On Casper-Somers Rd., 5 miles south of Eaton

This large reservation is almost all wooded in the beech-maple forest type with many other species present. The area is glaciated and the underlying dolomitic rocks, in which fossils are found, are exposed in the streams.

A large lake is used for canoeing and sailing but provides good habitat for water plants and animals. Hiking trails lead into the woodland, where wildflowers are abundant and birds and small mammals may be seen. A conservation plan has been worked out with the county Soil Conservation Service, the results of which may be followed with interest.

Buildings are not winterized, but the reservation is ideal for day outings or field trips. Permits are required for each visit.

Director of Programs
Miami Valley Council, Boy Scouts of America
184 Salem Avenue, Dayton 45406
(513) 461-5230

PUTNAM COUNTY

CASCADE STATE ROADSIDE PARK

3 acres

On SR 114, 1 mile east of Cloverdale

Like many of Ohio's roadside parks, this one is situated where many outdoor education projects can be executed. The picnic area is on sloping land shaded with a wide assortment of large trees. Remnants of the beech-maple association and the typical Black Swamp vegetation in the ash-swamp forest association remain among the flood plain, water-loving trees found in all parts of Ohio.

The Auglaize River, a tributary of the Maumee, flows northward, with Silurian age dolomite rocks forming occasional rapids. An ecological study of plant and animal life, including fish, in relationship to the physical environment, as well as man's impact on the scene, could be effectively carried on in this situation.

District Deputy Director
Ohio Department of Transportation
2100 West Street, Lima 45801
(419) 222-9055

KALIDA FISH AND GAME FARM

40 acres

On SR 694 north of Kalida

This acreage, managed for wildlife, provides a number of interesting study areas. The farm is on glaciated smooth lake bed, a part of the Black Swamp region. The soils are formed from clay deposits, poorly drained. This accounts for the natural marsh on the property, which is maintained for nesting waterfowl, rabbit, pheasant, and quail. Wood duck and goose boxes are located advantageously to encourage nesting on the site.

A four-acre pond, supplied with water pumped from a drainage ditch, has good fish, emergent vegetation, and other organisms for observation. An unmowed field with conifer and multiflora rose borders gives good bird and rabbit protection. The oak-hickory forest association of trees is maintained on this part of the property.

The use of a winterized club house may be requested if necessary. A nature trail and guide service are available also.

Manager
Kalida Fish & Game Club
Box 57, Kalida 45853
(419) 532-3412

LEIPSIC HUNTING AND FISHING RESERVE

80 acres

On Co. Rd. H, 3½ miles northwest of Ottawa

Enhanced by its proximity to the Kildare Golf Course, which increases the cover for wildlife, this property has natural habitats in the woods, lake, and open fields. Hickory, walnut, maple, locust, multiflora rose borders, and pine plantation provide food and cover for birds and small mammals. The 3½-acre lake is rich in aquatic plant and animal life. The area lies on the level, glaciated Lake Plain province in the Black Swamp region. It is underlain by heavy clayey soils and dolomitic rocks of Silurian age.

A large club house, a camping area, and picnic facilities are available for use upon request, free of charge to nature study classes or youth groups. Such groups are invited to contribute in planting trees or shrubs for wildlife protection and food.

Vincent Jim Niese
Route 2, Leipsic 45856

Mrs. Don Sager
Route 2, Ottawa 45875
(Across from the club house)
(419) 523-5014

LEIPSIC RESERVOIR

40 acres

3 miles east of Leipsic

A 30-acre reservoir was constructed on a branch of Beaver Creek by a railroad to impound water for use in steam locomotives. The lake and property are now leased to the Leipsic Conservation Association, but school groups are invited to use it.

Trees and birds may be observed around the lake and creek. Aquatic plants and animals abound.

Superintendent
Board of Public Affairs
City of Leipsic 45856
(419) 943-2704

OTTOVILLE QUARRIES

6 acres

On US 224 at Ottoville

The area is composed of two limestone quarries and a small stream impoundment on the Little Auglaize River. The west quarry is shallow, with an average depth of two feet, while the east quarry is quite deep, ranging to 65 feet. Thermoclines are recorded in the east quarry, which indicates insufficient oxygen to support fish life during the summer months.

Stocked fish populations in the quarries are composed of bass, bluegill, walleye, and crappie, with crappie, sucker, bullhead, and carp in the stream. Waterfowl are observed during migration. The original vegetation on the flat Lake Plain was elm-ash swamp forest. The land cover now is generally small trees and brush.

Division of Wildlife District 2 Office
952 Lima Avenue, Findlay 45840
(419) 422-6757

RICHLAND COUNTY

CAMP AVERY HAND

217 acres (plus access to adjacent land surrounding Clear Fork Reservoir)

On Orweiler Rd., 10 miles southwest of Mansfield

This property is adjacent to and includes tail water of Clear Fork Reservoir. In addition, it has its own wildlife pond, hardwood forest, and pine plantations of various ages. It is situated on the glaciated, dissected Allegheny Plateau with Mississippian sandstones exposed in the ravines. Open fields contribute to the diversity of wildlife and plants.

The camp has a large winterized lodge with food service facilities, hiking trails, and a picnic area away from the camp. School camping is being conducted several weeks of the year.

Scout Executive
Boy Scouts of America
445 West Longview Avenue, Mansfield 44902
(419) 522-5091

CAMP MOWANA

182 acres

On Fleming Falls Rd., off US 42 northeast of Mansfield

This camp is in a picturesque setting which includes Fleming Falls. Two streams have eroded through the Mississippian age sandstones and shales, and where they meet the falls are formed. In addition to being rugged in topography, a large portion of the property is wooded in the mixed oak forest type with many species in its association. A pond and open fields provide variety in habitat for aquatic plants and animals, wildflowers, and small woodland animals.

The property has three winterized lodges capable of housing 76 persons.

Rev. Kenneth Larkin, Manager
Camp Mowana
Route 2, Mansfield 44903
(419) 589-7406

CAMP TEMPLED HILLS

218 acres

On Durbin Rd., 1½ miles southeast of Bellville

Rolling hills above the valley of the Clear Fork, which has eroded through Mississippian age sandstones and shale, make a picturesque setting for this camp. The area lies on the glaciated, deeply dissected Allegheny Plateau within the boundary of the Illinoian drift, east of the border of Wisconsinan end moraine. The Illinoian ice sheet left a thin cover of material on the hills but thick deposits of sand and gravel in the valley.

A small pond and stream provide habitat for aquatic plants and animals. Fifty percent of the acreage is in beech-maple and oak forest and a white pine plantation. Fields with new plantings and in natural succession give the third major life environment.

The facilities include a winterized lodge with sleeping arrangements and food service for 30 persons; a renovated barn which sleeps 30 more persons; and a small staff house accommodating 16. The camp has decentralized cabin units, covered wagons, hogans, and showerhouses. Beautiful hiking trails lead through the rugged woodland, where many large hickories, beech and oak trees, wildflowers, birds, and small mammals may be found.

Manager
Camp Templed Hills
Bellville 44813
(419) 886-2380

CLEAR FORK RESERVOIR

Land - 1,000 acres Water - 1,000 acres

On SR 97, 1 mile west of Lexington

This reservoir was built by the city of Mansfield for water supply on a stream whose direction of flow was reversed by glacial end moraine. The land surrounding the present lake is rolling and wooded with trees of the beech-maple forest type and many other species that have been introduced. Wildflowers and small animals are typical of those found in wood, field, and water habitats. Waterfowl are plentiful during migration periods.

Manager
Clear Fork Reservoir
Route 7, Lexington 44904
(419) 884-1408

GRACE HAVEN WILDLIFE LABORATORY

18 acres

Off S.R. 13 near I-71, on Woodville Rd., one-half mile beyond the junction with Straub Rd.

Grace Haven Wildlife Laboratory is a delightful natural site containing a complete succession of plant life ranging from early growth of poverty grass to mature hardwood forests. The area also includes a meandering stream and three small lakes.

The laboratory is laced with informal trails that offer excellent opportunity for classes in biology and related subjects to identify trees and study plants. Bird habitat is excellent and insect populations are high. Facilities are limited to restrooms and parking.

Chester A. Weigle, Director
Grace Haven Wildlife Laboratory
Route 5, Woodville Road, Mansfield 44903
(419) 526-3749

HEMLOCK FALLS

102 acres

Off the Newville-Bunker Hill Rd., east on Tugend Rd. near Pleasant Hill Reservoir

Hemlock Falls is one of the most startlingly rugged and beautiful sites in Ohio. The area has been closely linked to the history of Richland County. Johnny Appleseed's name is encountered frequently; he had nurseries in the area. A 20-mile trail known by his name terminates at the falls. Indian history related to this site includes exciting tales from even earlier times.

The approach to Hemlock Falls is a pleasant walk down a path beyond the home of the owner, past a quiet pond, to a woods that opens into a level grassy plot. Surprisingly, just beyond is the edge of a narrow rocky ravine, with a gentle stream meandering among the ledges and crevices to a winding gorge below. The walls along the gorge are massive ledges of the Black Hand sandstone, the same formation which is responsible for the picturesque quality of the Hocking Hills, the Black Hand Gorge, and the overhang along Lyon Trail in the Mohican Forest.

Huge slump blocks, one of which is probably the largest in Ohio, have become dislodged from the rock walls by the weathering of the sandstone in its joints, and tilt gently away from the original rock wall. These great blocks of rock show the familiar honeycomb weathering pattern and cross-bedding which indicate the deltaic nature of the great deposits of sand left 350 million years ago at the edge of an inland sea. Plants and trees in natural succession grow on the sloping top; lichen and mosses partially cover the sides.

Although countless numbers of people on picnics, hikes, and gatherings have visited the site leaving a few signs of their visits, the gorge and the woods above have defied their encroachment and the area remains rich in flora. Hemlocks persist in the cool, moist environment; trailing arbutus, wintergreen, and walking fern are reported as remnants of still richer days. Even a chestnut tree (still bearing chestnuts) at the top of the ledge tells of the former forest association.

The owners will grant permission to responsible school personnel with careful, disciplined students, to visit or study the area.

Mr. and Mrs. Commodore Johnston
Route 1, Butler 44822
(419) 938-7542 (May - October)

HIDDEN HOLLOW CAMP

492 acres

On Possum Run Rd., east of I-71

Situated on a glaciated hilltop underlain by the resistant sandstones of Mississippian age, this camp has a panoramic view and many desirable features for school camping. A pond, a stream with erosional and depositional features including waterfalls, and many acres of woodland with mixed oak and oak-sugar maple forest types may be observed. Wildflowers and flowering shrubs in profusion, large pine plantations, open fields in natural succession, small mammals, birds of the field and edge of the forest, and a cemetery provide for rich experiences. A large modern winterized lodge, two dormitories with showers, cabins, a staff house, and classroom building complete the list of appointments.

The camp is fully utilized in the summer by the Friendly House Settlement of Mansfield. For several summers the Ohio Forestry Camp for conservation-minded teenage students has enjoyed the environment and facilities for two weeks in June of each year. In 1974, the Paul Koller Nature Trail was dedicated by representatives of Friendly House and the Ohio Forestry Association. The Koller Trail, with 14 interpretive stops of outstanding value, was designed by Howard Gratz of the Department of Natural Resources.

Director, Hidden Hollow Camp
380 North Mulberry Street, Mansfield 44902
(419) 522-0521

KINGWOOD CENTER

47 acres

In Mansfield at 900 Park Ave. West

Kingwood Center is an outstanding area famous for its development of plants suitable for the home garden. Featured in the herbaceous displays are annuals, perennials, and ornamental trees and shrubs. One unusual tree is "the fossil tree that lives," a large dawn redwood *(Metasequoia glyptostroboides)*.

A large pond and wildlife collection includes many upland game birds, pea fowl, ducks, and pheasants. A natural woodland with a trail and open meadows complete the diversity in habitat.

A full-time naturalist is available for nature trail guided tours. There is no charge. Facilities include a room available for catered or sack lunches.

Director
Kingwood Center
900 Park Avenue West, Mansfield 44903
(419) 522-0211

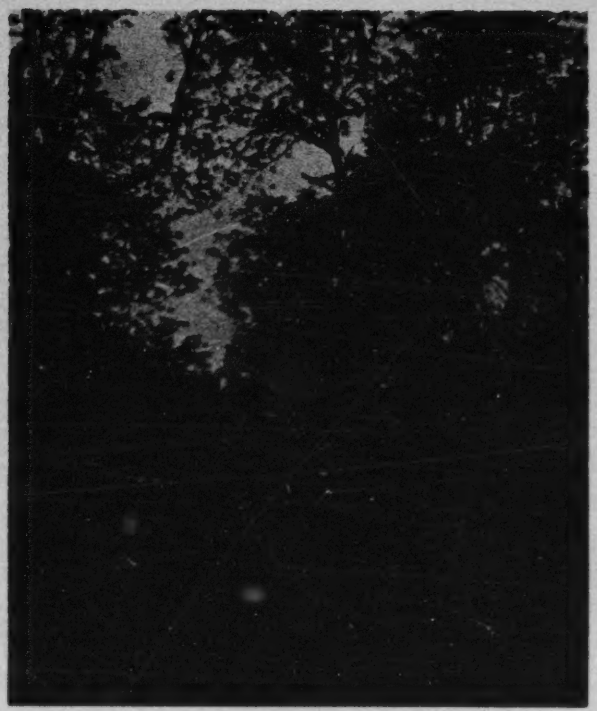
MALABAR FARM STATE PARK

715 acres

North of SR 603, on Bromfield Rd. north of Perrysville

Malabar Farm lies among rolling hills of the glaciated Allegheny Plateau, cut deeply by meltwater streams from the glaciers. On the hills the deposits are thin, but the fill of silt, sand, and gravel in the valleys is thick. The hills are underlain by the earliest resistant sandstones of Mississippian age, which are responsible for the change in topography from the flat plains a short distance west.

In such a physical environment, farming can be difficult. Louis Bromfield, after a widely recognized literary career which could well have continued, returned to his home



country to develop successful methods of farming. He purchased four wornout farms, corrected the soil erosion problems, enriched the fields, increased the nutrient value of food crops, and thus advanced not only agriculture but conservation.

The Departments of Natural Resources and Agriculture now have jurisdiction over the property. Tours are conducted through the unusual home and library as well as to the fields, woods, streams, and lake, all of which are exciting and educational in many ways. The dairy farm is still in operation.

Curator
Malabar Farm State Park
Route 1, Lucas 44843
(419) 892-2784

MANSFIELD SEWAGE PLANT

30 acres

East of Mansfield

With studies of pollution an important part of a student's education, it is fortunate to have a treatment plant willing to conduct guided tours. The tour is so arranged that the step-by-step process is easily understood. This is a 15-million-gallon-per-day plant of the active sludge type, giving a primary and secondary treatment. Arrangements are made through:

David Conant, Manager
Mansfield Sewage Plant
385 South Illinois Avenue, Mansfield 44905
(419) 589-2830

MANSFIELD WEATHER STATION

On SR 13, south at Terminal Building, Municipal Airport

Teachers of earth science and other classes from Richland, Morrow, Ashland, Knox, and Crawford counties may arrange with the personnel to provide a complete and interesting explanation of the weather station, a part of the 1,691-acre airport. Food dispensers are available.

Manager
ESSA Weather Bureau
Box 212, Mansfield 44901
(419) 526-4447

RICHLAND RURAL LIFE CENTER

80 acres

On Crall Rd., 5 miles northeast of Mansfield

This former farm with rich habitats in woodland, field, stream, and pond is well used in spring and fall by sixth-graders from the Mansfield public schools for outdoor education.

Picturesque ravines with 20-foot sandstone walls and overhangs make an interesting geology story. The region lies on the glaciated, moderately dissected Allegheny Plateau, a feature observable in the valleys and hills as one leaves the flat till plain on the west. The property has a deciduous woodland of mixed hardwoods with oak and sugar maple predominating. Wildflowers, birds, and small mammals may be seen.

A one-acre pond provides water for the study of aquatic plants and animals. A winterized lodge with a large meeting room is available.

Manager
Richland Rural Life Center
Extension Service Office
523 Park Avenue East, Mansfield 44905
(419) 524-4404, Ext. 328

SHELBY MUNICIPAL WATER WORKS

3 acres

On North Gamble St., Shelby

For a better understanding of water sources and treatment, a tour of this operation may be arranged. The main source of water here is surface water stored in two reservoirs and softened by the lime-soda ash process. At the treatment plant is a chemical building where water and chemicals are mixed. From there the water flows to two flocculating and settling tanks. Filter-treated water is stored in a 500,000-gallon clearwell until needed.

Water Works Manager
City of Shelby 44875
(419) 342-4085

WILLOW VALLEY FARM
150 acres

On Crimson Rd. off SR 39 to Mt. Zion Rd., southeast of Mansfield

Willow Valley Farm is a special experimental strawberry farm developed by an enterprising Mansfield city fireman and his wife who were seeking country living and a new interest. Already intrigued with antiques and early American furniture, they found a 150-year-old house and seven acres to start their new project. More unused land was added and their original fruit and vegetable farm became "Strawberry Acres." The first year they tried a 300-plant patch. In 1973 they set out 38,000 plants on seven fertile acres.

Use of an irrigation system from three wells to protect fruiting vines against freeze damage and to create a cooling mist in hot weather has proved beneficial for the strawberries and a fledgling peach orchard taking shape on a protected hillside. Last season about half the shortcake fruit was picked by do-it-yourself people. Twenty-one thousand quarts were picked and sold.

Green thumbs, glacial till loam soil, and persistence have made this long-neglected acreage productive and worth studying.

Don Green
Willow Valley Farm
Crimson Road, Mansfield 44903
(419) 589-4699

WOOSTER PRESBYTERY CAMP
270 acres

Off SR 95, on McCurdy Rd. (Co. Rd. 378) southwest of Perrysville

This camp, with winterized lodge and dormitories, is the site of the Mohican School in the Out-of-Doors.

Situated on the shore of Pleasant Hill Lake, the site also includes creek beds, fields, forests, and a pond. The topography of the area is rolling, the result of erosional processes on the sandstones and shales of Mississippian age as well as the process of glaciation. On this property is a unique spot where deposits of two ice sheets, the Wisconsinan on the north and the old Illinoian on the west, come together in a sharp angle, termed a reentrant.

As an outdoor laboratory, the camp provides a setting for studies of soil, weather, astronomy, geology, and wildlife. Pleasant Hill Dam with its unique "morning glory" spillway and the adjacent Mohican State Forest and State Park provide additional study possibilities.

Schools interested in a field trip or enrollment in the program, contact:

Wooster Presbytery Outdoor Center
and Mohican School in the Out-of-Doors
McCurdy Road, Route 2
Box 150, Perrysville 44864
(419) 938-3715 - Camp Phone
(419) 938-3710 - Mohican School Phone

ROSS COUNTY

ADENA STATE MEMORIAL
300 acres

Off SR 104 at Allen Ave., northwest of Chillicothe

This early 19th-century estate of Thomas Worthington was called "Adena," a Hebrew name given to places remarkable for the delightfulness of their situations. Situated on a hill, the mansion faces the series of sandstone-topped hills just north of Chillicothe, the view which served as an inspiration for Ohio's official seal. The estate became a state memorial in 1946.

Recent additional restoration of the farm complex has increased its historical and esthetic value. The beautiful house and large barn are complemented with gardens, orchard, many species of trees, rocky ravines, and woodland. The estate is open April through October, closed on Mondays. School groups are admitted free.

The Ohio Historical Society
Columbus 43211
(614) 466-4663

BUCKEYE TRAIL
25 miles

From the roadside park on US 23 at Alma through the Scioto Trail State Park and State Forest northeast to Tar Hollow State Forest and State Park

The trail leaves Pike County and enters Ross County near the Scioto Trail State Forest. The topography consists of rounded hills and broad valleys, the hills topped with the resistant sandstones of Mississippian age. The area is beyond the line of glaciation with sandy residual soils on the upland. The woodlands are oak-hickory forest type with tuliptree, sassafras, dogwood, and sour-gum in the association. A side trail with white blazes leads to the Stewart Lake picnic and camp areas.

Near the eastern edge of the forest is a "hikers only" branch of the trail which ascends a very steep hill. This knob abounds in spring wildflowers. Here one can look eastward across the broad Scioto River flood plain and the preglacial Teays River valley. From here on north for some distance the Teays and Scioto valleys coincide. Several high hills known as outliers or monadnocks, because they rise

above the level of most of the hills, may be seen. Mt. Logan, depicted on the State of Ohio seal, is in the distant north.

At Higby Bridge, the trail crosses not only the Scioto River but the Ohio and Erie Canal. Here the canal stood 573 feet above sea level, the same level as the surface of Lake Erie. Beyond US 35, the trail traverses a lovely wooded area where ridges afford good views of both valleys. Relict prairie vegetation appears in a few spots at high elevations. Deer and grouse are plentiful.

A new section of the trail goes from the Goshen Run Church on Musgrove Road across country, giving some outstanding views of the valley. Facilities are available at the Buffalo Trail Camping Area and at Tar Hollow State Forest.

For further information and maps contact:

Buckeye Trail Association, Inc.
P.O. Box 254, Worthington 43085

CAMP VALLEY VISTA

22 acres

Off SR 41, 1 mile north of US 50 on Tong Rd.

Valley Vista is aptly named, for it lies in the broad Paint Creek valley adjacent to wooded hillsides. It is a sports camp, primarily, where boys are given instruction and players are trained in baseball, basketball, and golf. The area is rich in natural history, and field trips or school camping can be negotiated.

The woodlands are in the beech-maple forest association, typical of the soils derived from Illinoian glacial till found characteristically in this part of the county. Flood plain species such as sycamore, elm, ash, and cottonwood grow along the stream.

An intriguing geology story involving two glaciers, stream reversal, a great volume of meltwater, and the underlying dolomite rock formations, is the basis for a fascinating ecologic study of the area.

Bill Boatman, General Manager
Camp Valley Vista
Bainbridge 45612
(614) 634-2302

CHILLICOTHE SCHOOLS LAND LABORATORY

24 acres

At 455 Yoctangee Pkwy., north of Administration Building

A section of the old Ohio Canal provides a unique site for the school arboretum which is being developed here. Students and staff have planted many species of trees, wildflowers, and bulbs. They have cleared and made trails for easy access and brought in glacial boulders. A pamphlet has been prepared explaining the soils, trees, and plantings.

Mrs. Margaret Bobzion, Director
Chillicothe School Land Laboratory
455 Yoctangee Parkway, Chillicothe 45601
(614) 773-2281

DAUGHTERS CONSERVATION AND WILDLIFE AREA

87 acres

On Baptist Hill Rd. off SR 772, 6 miles southwest of Chillicothe

This private retreat on property designated as a wildlife preserve is shared with groups interested in nature study. The area is bounded by 163 acres of Mead Corporation timberland which contributes to its value as a wildlife refuge.

Part of the hillside property is wooded in the oak-hickory forest association; the remaining acreage is being reforested with conifers. Five soil types resulting from the glaciation process are reported to be present.

A three-acre lake provides swimming and aquatic habitat. A cabin is accessible for facilities or overnight use.

Carl Daughters
Box 721, Chillicothe 45601
(614) 774-2066

MOUND CITY GROUP NATIONAL MONUMENT

67.5 acres

On SR 104, 3 miles north of Chillicothe

In 1923, this prehistoric Hopewell Indian burial ground was established by presidential proclamation as a national monument, for development and protection by the National Park Service. A visitor center contains exhibits to help understand Mound City and the people who built it. An embankment surrounds the mounds beyond the building. Within the enclosure are 23 mounds which contain the evidence of elaborate burial rites of the Hopewell people who flourished for about 1,000 years in the Scioto valley.

The culture of these people is best preserved in their high artistic achievements and their practice of erecting earth mounds over the remains of their dead.

Trees on the parklike property as well as the glacial meltwater-fed Scioto River and its broad valley may also be studied here. A map and informational brochure make a self-guiding tour effective, or advance arrangements may be made to receive special services. A set of slides, narrative, and guide service are available, without charge to school groups.

Archeologist
Mound City Group National Monument
Box 327, Chillicothe 45601
(614) 774-2541

PLEASANT VALLEY STATE WILDLIFE AREA

1,414 acres

On Egypt Pike off SR 104, 3 miles northwest of Chillicothe

This area lies on a broad, flat upland with its western escarpment covered with oak-hickory forest. It is adjacent to a former north-flowing branch of the Teays River of

preglacial age. The region is covered with thick Wisconsinan drift of high lime soils, underlain by Ohio shale.

Many species of birds and mammals are present. This area is reported to be at the western margin of the range of ruffed grouse and the eastern limit for naturally occurring ring-necked pheasant populations.

Division of Wildlife District 4 Office
360 East State Street, Athens 45701
(614) 593-6933

ROSS LAKE STATE WILDLIFE AREA

1,110 acres

On Hydell Rd., 3½ miles east of Chillicothe

Lake, croplands, meadows, old fields and oak-hickory, beech-maple woodlands provide a wide variety of habitats for this area. The land is flat to rolling, with soils developed from a thin deposit of Illinoian till over acid sandstone and shale rock strata. The area is reported to be near the western margin of the ruffed grouse range.

Division of Wildlife District 4 Office
360 East State Street, Athens 45701
(614) 593-6933

SCIOTO TRAIL STATE FOREST AND STATE PARK

Forest - 9,151 acres Park - 248 acres

Off US 23 on SR 372, 9 miles south of Chillicothe

These two properties combine to make a very fine natural area. Acquisition began in 1922 for land which had been used as an artillery firing range during World War I. The extensive acreage lies west of the Scioto River on the Allegheny Plateau just beyond the boundary of glaciation. The rounded hills are topped with the early Mississippian sandstones which are responsible for the rugged topography. Dissecting streams give exposures of sandstone and shale. The area is covered by oak-hickory forest types with sour-gum, dogwood, and sassafras contributing to beautiful autumn coloration. Many acres of pine plantation give added cover for wildlife.

The park is a popular one, with its dense woodland, rugged topography, and Stewart and Caldwell lakes. Hiking trails, including a segment of the Buckeye Trail with its blue glazes, have been developed through the forest and park. An historical church on the property adds to its interest.

Park Manager
Scioto Trail State Park
Route 5, Box 317, Chillicothe 45601
(614) 663-2125

Forest Ranger
Scioto Trail State Forest
Route 5, Chillicothe 45602
(614) 663-2523

TAR HOLLOW STATE PARK AND STATE FOREST

Forest - 16,126 acres Park - 540 acres

7 miles north of Londonderry on SR 327

This extensive reservation is situated in the sandstones and shales of Mississippian age just east of the glacial boundary. The terrain is rugged, covered by oak-hickory and beech-maple forest types. Streams traverse rocky beds creating diverse habitats.

In addition to a wealth of wildflowers, trees, and shrubs typical of residual sandstone soils, many animals may be found. Among these are deer, grouse, rabbit, and squirrels. Wild turkeys were successfully introduced and other birds are abundant. A small lake was formed for recreation purposes but the edges are rich in vegetation and aquatic animal life.

The resident camp area contains a very large rustic lodge with food service facilities. Sleeping cabins are scattered on the hills near the lodge. This area has long been used by schools and agencies for resident outdoor education. A naturalist is on duty from mid-June to Labor Day.

The forest was established in 1936 as one of the federal land utilization projects. A fire tower is a bonus facility for conservation education.

Forest Ranger
Tar Hollow State Forest
Route 1, Londonderry 45647
(614) 887-3879

Park Manager
Tar Hollow State Park
Route 2, Laurelville 43135
(614) 887-4818

SANDUSKY COUNTY

ALDRICH POND STATE WILDLIFE AREA

Land - 5 acres Water - 35 acres

Off US 20, 2 miles northwest of Lindsey

The area is little more than a shallow pond, situated on the glaciated flat Lake Plain. It has abundant aquatic vegetation including cattails, spike rushes, coontail, myriophyllum, certain potomogetons, filamentous algaes, sagittaria and others. It has been stocked with a wide variety of fish. Aquatic organisms and migrating waterfowl may be observed.

Division of Wildlife District 2 Office
952 Lima Avenue, Findlay 45840
(419) 422-6757

GREEN SPRINGS STATE NURSERY

120 acres

1 mile west of Green Springs

This is a forest tree nursery on which are grown approximately 5 million seedlings annually for reforestation purposes. The nursery was established in 1948 and at the present time, unskilled labor is provided by 30 part-time seasonal workers. A field trip has merit for an understanding of the processes of seed gathering, planting, transplanting, protection, and distribution.

Superintendent
Green Springs State Nursery
1518 East County Road 113, Green Springs 44836
(419) 639-2802

HAYES STATE MEMORIAL

25 acres

On City Rt. 6 at the corner of Buckland and Hayes avenues in Fremont

A field trip to this historic and beautiful wooded estate of Rutherford B. Hayes, 19th president of the United States, could serve a dual purpose. Spiegel Grove became the Hayes home in 1873 after the famous Ohio lawyer had served his second term as governor. A distinguished congressman, governor and president, Hayes is credited with significant achievements in the reconstruction of the South, civil service reforms, and strengthening the national currency.

The wooded estate surrounding the spacious home, tomb, library, and museum contains a section of a famous Indian trail, the Sandusky-Scioto Trail, which extended from the Ohio River to Lake Erie. It winds for nearly half a mile through the grove of majestic hardwood trees. Many of the great trees have been named for famous Americans who visited Spiegel Grove, a custom initiated by President Hayes which continued after his death. The walks, driveways, planted trees, shrubs and flowers reflect the love of President and Mrs. Hayes for their home.

Students of all ages from near and far are invited to visit and enjoy the memorial. No picnicking is permitted.

Manager
Hayes State Memorial
Fremont 43420
(419) 332-2081

MILLER BLUE HOLE

13 acres

Off SR 6, 8 miles northeast of Fremont

This area contains a small blue pool similar to the Blue Hole at Castalia, and there is no charge for the visit. The pool is the result of slightly acid groundwater penetrating the soluble limestone or dolomite rocks along cracks and bedding planes. The water moves through the rocks forming a network of cavities eventually emerging at the level where the groundwater table is exposed.

The groundwater flowing from the blue hole contains no oxygen until it reaches the surface, due to its long trip below the surface. The temperature remains constant all year for the same reason. This makes such pools a haven for waterfowl when Sandusky Bay and Lake Erie freeze up.

A limited amount of vegetation is found, which includes charo and other filamentous algae characteristically found in hard waters. Fish in the upper layer of water are green sunfish and top minnows; the stream flowing from the pool contains such species as sculpin, blacknose dace and occasionally rainbow trout. The land surrounding the blue hole is in brush, small trees, and grassland.

Division of Wildlife District 2 Office
952 Lima Avenue, Findlay 45840
(419) 422-6757

SCIOTO COUNTY

CAMP MOLLY LAUMAN
100 acres

On Bear Creek Rd., 1 mile west of SR 104, north of Portsmouth

This property, used by Girl Scouts for many years, continues to provide a sense of seclusion and kinship to the natural environment. Situated on maturely dissected hills composed of Mississippian age sandstones and shales, the topography is rolling. Soils are residual, thin, and acid but provide the nutrients required for the oak-hickory forest type. The property is heavily forested except for the campus and a field adjacent to the swimming pool. Bear Creek and small tributaries give good water environment, erosional and depositional features for study.

A large food service lodge, staff house, health cabins, four units with kitchens for use in late spring and early fall, and three shower houses constitute the facilities available. A "Century House" accommodates crafts and indoor recreation activities.

The camp is adjacent to the Mead Experimental Forest of 700 acres, which may be used cooperatively.

Camp Registrar
Seal of Ohio Girl Scout Council
P.O. Box 24, 1294 Hubbard Road, Galloway 43119
(614) 878-1381

MEAD EXPERIMENTAL FOREST
700 acres

On Bear Creek Rd., 1 mile west of SR 104, north of Portsmouth

This extensive acreage is used for experimenting with various wood harvesting methods. Research is carried on by the US Forest Service in cooperation with the Mead Corporation. The area lies in the unglaciated rolling hills of the Allegheny Plateau, underlain by Mississippian age sandstones and shales which are exposed in the ravines. A roadway extends around the property through plots which are clear cut, partially cut in various degrees, or not cut. Signs explaining the program are located at intervals. A tour is recommended for high school or adult groups only.

In addition to the forest research, trees in the oak-hickory-tuliptree association may be studied. Many wildflowers and animals are also to be found here.

Herbert L. Morgan
Mead Corporation, Chillicothe 45601
(614) 772-3422

SHAWNEE ENVIRONMENTAL RESOURCE CENTER
10 acres

In the Shawnee State Forest, 4 miles west of the junction of US 52 and SR 125

The Department of Natural Resources (DNR) uses the Environmental Resource Center at Shawnee (and Lake Hope; see Vinton County) to familiarize educators with the methodology of environmental education and to provide a practical workshop for teachers to work with their students in a rich environmental setting. DNR's environmental education section emphasizes a variety of widely recognized approaches to environmental education, and provides a comprehensive survey of DNR facilities and personnel and program resources.

Before teachers may conduct their own programs with students at the resource center (which has no teaching staff), school staff representatives must attend one of these workshops. Arrangements can be made for DNR personnel to visit schools to provide detailed information about the program for teachers wishing to use the center.

The center is fully equipped to accommodate resident programs. The physical plant includes five buildings: a recreation hall, a dining hall, a small first-aid building, and two dormitories, each capable of housing 20 students. Separate facilities are available for instructors. The center is also equipped to provide balanced, preplanned meals. Adjacent to the center are a 5.5-acre reservoir and a small creek. The resources and facilities of the Shawnee State Forest and State Park are readily accessible.

The center is open throughout the year. However, the Youth Conservation Corps (YCC) program makes full use of the facility from mid-June through August.

Manager
Shawnee Environmental Resource Center
Box 128, Friendship 45630
(614) 858-5567

Ohio Department of Natural Resources
Environmental Education Section
Fountain Square, Columbus 43224
(614) 466-5884

SHAWNEE STATE FOREST AND STATE PARK
58,165 acres

Off SR 125 near junction with US 52, west of Portsmouth

Sometimes called Ohio's Little Smokies, this rugged forested area is the largest continuous woodland in the state. The property lies on the unglaciated, highly dissected Allegheny Plateau underlain by Mississippian age sandstones and shales. It is bordered on the south by the Ohio River, which has some small tributaries draining the land. The

Scioto Brush Creek on the north cuts through the rock formations to contribute to the extremes in topography.

The forest is primarily oak-hickory type with shortleaf pine on dry sites. Rabbit, deer, grouse, and squirrel are present. Hiking trails extend for more than 40 miles through the woodland. A backpacking trail leads through remote woodlands and rugged terrain. Panoram Trail follows a high ridge through the most spectacular portion. Special hikes and a nature program are provided at various times of the year. From any of the five fire lookout towers thousands of acres of unbroken forest can be seen.

The park contains three lakes: Bear, Turkey Creek, and Roosevelt. These occupy about 80 acres. Wildlife and an excellent display of wildflowers may be seen in park and forest.

The recently designated 5,000-acre Shawnee Wilderness Area is located in the southwest part of the state forest and lies between Upper Twin Creek and Lower Twin Creek roads. It is just north of US 52 at the Scioto and Adams county lines. This rugged, rocky terrain, heavily forested, is completely protected to ensure at least some vestige of wilderness for future generations. No timber management except forest fire control, no roadways, no motorized vehicles, and no horseback riding are permitted in an attempt to prevent man's persistent changes. Hikers are free to use the area but are urged to leave the forest unmarked and undisturbed. Wildlife is abundant in the central hardwood forest, with oak, hickory, ash, and tulip canopy interspersed with mountain laurel, pink azalea, and the cool ravine hemlock, yew, and other northern species.

A new lodge built of stone and rough-hewn Douglas fir timbers, with an interior Indian motif, is a reminder of the original Shawnees, who had little visible impact on the wilderness area in which they lived. Special features have been

included in the lodge design for the comfort and convenience of handicapped persons.

Park Manager
Shawnee State Park
Box 52, Star Route, Portsmouth 45662
(614) 858-4933

Forest Ranger
Shawnee State Forest
Box 8, Friendship 45630
(614) 858-4201

SENECA COUNTY

CAMP GLEN
107 acres

On Twp. Rd. 131, one-fourth mile south of St. John's Bridge on the Sandusky River

This delightful Camp Fire Girls camp, used primarily as a resident summer camp, has infinite possibilities for school class use for outdoor education. The Sandusky River (which at the camp site has a shallow, dredged boat basin with dock), its flood plain, terrace, and extensive wooded areas furnish many challenging study possibilities. Reclaimed pasture land and wooded ravines provide a variety of hardwood species including maples, oaks, beeches, hickories, tulip, and red elm. Several coniferous species have been planted, and wildflowers are abundant in season. Indications of such mammals as raccoon, deer, rabbit, skunk, wood duck, mice, and chipmunk—or the animals themselves- may be observed.

The site as well as the entire county is rich in historical legend and Indian lore. It was named for the Seneca Indians who had a reservation within this county, although it may not have been on Camp Glen property.

A large lodge and kitchen as well as sleeping cabins can accommodate resident camping for school classes, but the structures are not winterized.

Camping Director
No-We-Oh Council of Camp Fire Girls, Inc.
304 Hardin Street, P.O. Box 274, Findlay 45840
(419) 422-5415

CAMP HERTZER

43 acres

On Co. Rd. 33, 5 miles north of Tiffin

The camp is situated on the east bank of the Sandusky River which is reported to be too shallow for swimming or boating. Twelve acres are reforested farmland designated as a wildlife conservation area, containing 10,000 black walnut, white pine, Carolina poplar, and locust trees planted in 1959. Twelve acres are in open grassland; the balance is riverbank, an old mill race, and woodland.

Two deep ravines in their natural condition may be explored along undeveloped trails. Wildflowers, birds, and small mammals may be studied. Mature trees include several varieties of oak, maple, elm, ash, sycamore, tulip, dogwood, and sassafras.

The use of the camp, with or without the lodge and facilities, must be prearranged and responsible adult leadership assured.

C.W. Lutz
465 E. Perry Street, Tiffin 44883
(419) 447-5963

CAMP PITTENGER

29.5 acres

3 miles east of McCutchenville

This property lies on a gently rolling glacial till plain on the banks of the Sandusky River and includes a number of interesting natural features. Wildflowers and animals may be seen in season. Conservation practices are the most important features to be studied. A lodge is available for spring or fall use.

YMCA of Tiffin
79 S. Monroe Street, Tiffin 44883
(419) 447-8711

CAMP SENECA

215 acres

On SR 101, 1.3 miles northeast of SR 19

This large woodland area on a dairy farm is used as a campground but may serve as a site for outdoor education experiences. The three major habitats are present, a pond and a creek providing for the study of aquatic plants and animals. Waterfowl are seen occasionally, and a mallard hen is reported to have nested by the creek for five years. Open fields and meadows may be observed. The glaciated soils are high in lime content, though poorly drained because of the smooth Lake Plain surface.

The wooded area contains beech-maple forest types together with some sycamore, ash, and cottonwood along the stream. Wildflowers are abundant; deer, fox, quail, pheasant and numerous other animals inhabit the area.

Don Kessler
Route 2, Box 189, Clyde 43410
(419) 639-2030

KNOBLAUGH WILDLIFE SANCTUARY

5 acres

On Co. Rd. 15 and Pleasant Twp. Rd. 148

This small area provides a study in changing ecology as trees grow and the associated plants and wildlife change. It is a reforested plot, with both deciduous and coniferous seedlings started 15 years ago.

The owner will act as guide for class tour or study. A small private lake is adjacent and may be used for additional study if advance arrangements are made.

Mrs. W.C. (Jean) Knoblaugh
Route 3, Box 271, Tiffin 44883
(419) 992-4475

PLEASANT VALLEY GIRL SCOUT CAMP

98 acres

On Pleasant Twp. Rd. 76

Situated in the pleasant valley of the Sandusky River, this camp is wooded in the beech-maple forest association on the uplands, with ash and elm swamp forest along the stream. The woodland provides sanctuary for many species of birds, some reported to be rare in Seneca County. Wildflowers, too, are profuse with some unusual types represented. For field trip or camping the site deserves consideration.

Use of the property for the day or overnight requires written permission for non-Scout affiliated groups. The fee for its use is determined by the facilities reserved.

Camp Registrar
Erie Shores Girl Scout Council, Inc.
42639 North Ridge Road, Elyria 44036
(216) 233-6112 - Lorain Office
(216) 324-6104 - Elyria Office

SENECA CAVERNS

1.5 acres

Off SR 269, 3½ miles south of Bellevue

A trip through the seven electrically lighted rooms of this cavern is interesting, adventurous and educational. The cave, developed on seven levels in the crystalline, thick-bedded Columbus limestone, was not formed by solution but by the separation of the walls of a fissure. The amount of water seeping through the limestone is negligible, as is indicated by the lack of stalactites and stalagmites. A subterranean river of considerable depth flows 165 feet below the surface of the ground.

There are special rates for school classes and organized groups on weekdays.

Richard C. Bell
Route 3, Bellevue 44811
(419) 483-6711

SHELBY COUNTY

LAKE LORAMIE STATE PARK

Land - 1,180 acres Water - 825 acres

On SR 362 between Fort Loramie and Minster

Lake Loramie was built as a feeder lake on the old Miami-Erie Canal about 130 years ago. It lies in the glaciated, relatively flat Central Lowland province, underlain by dolomitic formations of Silurian age. The soils are high in lime content and agricultural yields are excellent.

The north shore is largely farming country, but extensive forests have been retained on the south shore. The park is located on the southwest corner where the mixed hardwood forest type includes many oaks and hickory trees. The south shore and Blackberry Island contain good spring wildflowers. A naturalist is on duty from mid-June to Labor Day.

Manager
Lake Loramie State Park
Route 1, Minster 45865
(513) 295-2011

LEIGHTY LAKE

12 acres

On SR 47 and 66, south of Newport

This is an historically interesting site because the small lake served as a passing station for the canal boats on the Miami-Erie Canal. All land is private except the old towpath. The lake is now stocked for fishing. A study of aquatic plants and animals is feasible.

Division of Wildlife District 5 Office
Route 3, Xenia 45385
(513) 372-7668

LOCKINGTON LOCKS

45 acres

At intersection of SR 176 and 132, Washington Township

Five locks in Lockington and three others on the south are the chief interest at this site. The five adjoining locks of the old Miami and Erie Canal raised or lowered the water level of the canal approximately 65 feet. An aqueduct connected the five to a sixth lying south of Loramie Creek. This aqueduct collapsed about 1909, and the 1913 flood destroyed much of the canal from Lockington to Piqua.

The Ohio Historical Society has restored about 1.2 miles extending from the southern edge of the Johnston farm north. (See Miami County.) Canal lands north of the town contain many interesting features.

The lock area lies on the bluffs east of Loramie Creek on mostly unkempt terrain. The region has been glaciated by both the Illinoian and Wisconsinan ice sheets, which left a rather thick coating of drift. The valley fill of sand and gravel from the glacial meltwater is reported to be about 80 feet in thickness. The present vegetation reflects man's influence on the ecology of the area.

The Ohio Historical Society
Columbus 43211
(614) 466-4663

SIDNEY SCHOOLS LAND LABORATORY

13 acres

At Sidney High School on Campbell St.

This outdoor education area is primarily a beech forest typical of western Ohio. It contains, in the association, sugar maple, red and white oak, ash, and basswood. Typical spring wildflowers are present.

The town lies both on the terraced flood plain and the more elevated bluffs which lie west of the Miami River on heavily glaciated land. The soils are high lime till and generally productive. Outcrops of the basal portion of the Niagara dolomite are exposed in places.

Hiking trails have been developed on the school property and visiting classes or outdoor education teachers are welcome.

E.V. Marcozzi
Route 1, Sidney 45365
(513) 492-2107

STARK COUNTY

BOLIVAR RESERVOIR

Land - 880 acres

On Deuber Rd., 4 miles northeast of Bolivar

The flood control program of the Muskingum Watershed Conservancy District called for a dry reservoir on Sandy Creek very near its junction with the Tuscarawas River. A dam was constructed and land acquired for emergency use only.

Most of the land lies just south of the Wisconsinan glacial boundary. Valley filling and stream modifications may be observed. The Tuscarawas River was first outlined by a preglacial Teays stream, deepened during another period known as Deep Stage, then filled with outwash by the Wisconsinan ice sheet which also reversed its flow.

At present the district lands are covered with Christmas tree plantations. A beaver dam and lodge close to the road may be seen. Facilities have not been developed.

The Muskingum Watershed Conservancy District
1319 Third Street, NW, New Philadelphia 44663
(216) 343-6647

BUCKEYE TRAIL

27 miles from Clinton to Bolivar plus 5 miles from Wingfoot Lake to Crystal Spring

The trail has two branches in this county. The east branch enters the county from Wingfoot Lake and the west branch comes in from Clinton, both joining at Crystal Spring and continuing southward along the canal route to Bolivar.

There is little variation in the pattern for the trail in this county. It follows the old canal towpath in a relatively straight line. The canal roughly parallels the east bank of the Tuscarawas River. One exception occurs in Massillon, where a side trail, with white blazes, leaves the canal and goes by city parks, along residential streets, and back to the canal route.

Vegetation is brushy. Observation of the river valley will reveal that it contains a great amount of glacial sand and gravel deposited as a wide outwash belt in the valley of a preglacial river which flowed northward. In places, the Massillon sandstone is exposed in bluffs along the river.

At Canal Fulton there is a park with a reconstructed canal boat, and in the town nearby is an excellent Canal Museum.

For maps and further information contact:

Buckeye Trail Association, Inc.
P.O. Box 254, Worthington 43085

CAMP WANAKE

200 acres

On SR 93, 2 miles north of Beach City

All stages of forest succession from open meadow to nearly virgin deciduous forest are found on this property. Pines planted at intervals since 1930 provide contrast in evergreen growth. Two three-acre lakes, one deep and one shallow, provide bass and bluegill fishing and muskrat habitat, and are ideal for pond study. There are numerous springs on the property and the woodlands have been left in their natural state.

The camp has winterized resident facilities for 80 persons; in the summer it houses 200 persons. Large barns have been converted into camp buildings yet retain a rustic appearance. Hiking trails and outside picnic shelters are advantageously developed and laid out for studying natural habitats. The camp is within three miles of strip mines, the Beach City Conservancy Dam, and the Stark Wilderness Center.

David Schar, Camp Wanake
Route 1, Beach City 44608
(216) 756-2333

CANTON PARK SYSTEM

The City of Canton maintains a number of parks with a total area of 863 acres. Emphasis is on recreation but several areas are valuable for nature study.

Director-Secretary
Canton Park System
Nimisilla Park, NE, Canton 44705
(216) 452-2731

MONUMENT PARK

16 acres

This park includes McKinley Monument, many trees, a lagoon bordered with conifers which is good for bird study, a stream, and planted flowers. The Stark County Historical Center is adjacent to the monument.

NIMISILLA PARK

23 acres

This park area contains courts, swings, and pavilions for picnics. A wide variety of trees may be observed.

STADIUM PARK

88 acres

This is the largest park in the system and has many trees, flowers of all varieties planted around a garden center, a Japanese garden, a fountain, and a hillside covered with daffodils and tulips in the spring, chrysanthemums in the fall. Hiking and bicycle paths and other facilities are available.

LAKE PARK STATE WILDLIFE AREA

93 acres

On Lake Park Blvd., east of Alliance

A 20-acre lake attracts a variety of waterfowl to this area during migration and a few wood duck nest here. The property contains woodland of two forest types, one a swamp forest with elm, ash, and soft maples predominating; the other a beech-maple association on the scattered knolls throughout the woodland.

It is a good area for common spring wildflowers. Management practices for fish, wildlife, and forestry may be observed also.

Division of Wildlife District 3 Office
912 Portage Lakes Drive, Akron 44319
(216) 644-2293

MARLINGTON LAND LABORATORY AND WILDERNESS TRAILS

100 acres

4 miles west of Alliance on Beeson St.

In 1960 Marlington School District purchased a typical dairy farm outside of Alliance on which to build a high school. The property presently has a high school, middle school, parking lots, and athletic fields. The remainder of the farm is devoted to a school agricultural and outdoor education area.

The topography of the land is gently rolling, the soil a typical glacial loam till. Forty acres are used for vocational agriculture crops, and a few acres are returning to woodland by natural succession. Farm ponds and a wildlife area have been developed, but the woodland trails designed and used by the students are their particular pride. The forest is beech-maple with many other trees and shrubs to be found and identified. Students and faculty welcome school groups and will serve as guides through their ecological center.

Gordon Eaton, Vocational Agricultural Instructor
10450 Moulin Avenue, Alliance 44601
(216) 821-9944

STARK WILDERNESS CENTER

409 acres

On US 250, 1 mile west of Wilmot

A great variety of habitats on this wildlife sanctuary include a near virgin forest called Sigrist Woods. It contains oaks 300 to 400 years old, large beeches, sugar maples, and hickories. Other wooded areas, a lake, a pond, marshes, streams, meadows, and fields in natural succession are also available for study.

The area lies on an end moraine not far from the greatest advance of the Wisconsinan ice sheet and is underlain with rock formations of the Pennsylvanian series. A resistant one known as the Massillon sandstone outcrops in the hillsides. The topography is rolling to rugged, with as much as 200 feet difference in elevation. A glacial gravel ridge and large transported boulders are evidence of glaciation. The 13 soil types reported to be found on the property are further indications of glacial action.

Six nature trails have been developed, two of which are described in self-guiding booklets. An interpretive building is the starting place for tours which are programmed for thousands of school children each year. Classes or groups may become involved in tree planting, planting shrubs of food and cover value for wildlife, and other conservation projects.

Director
The Stark Wilderness Center
Box 38, Wilmot 44689
(216) 359-5117

SUMMIT COUNTY

ADELL DURBAN PARK AND ARBORETUM

36 acres

3300 Darrow Rd., Stow

Over 200 trees and shrubs have been marked for self-guiding nature trails through natural woodland and the arboretum. A great variety of wildflowers enhance the hilly terrain, which is the result of glaciation and the erosion of the resistant Sharon conglomerate rock formation which lies beneath the surface. A nature center and greenhouse are being developed. Nature hikes may be scheduled with the park naturalist.

Director
Stow Park and Recreation Department
3300 Darrow Road, Stow 44224
(216) 688-8238

AKRON STATE FISH FARM

26 acres

On Portage Lakes Dr., 1 mile east of SR 93

March through June are the months recommended to observe this hatchery in operation. It produces chain pickerel, walleye, and muskellunge. Twelve ponds and a hatchery building are on the island unit. A levee around the island provides access for public fishing in North Reservoir. Use is extensive; a census shows a yearly count of over 10,000 people using the outer levee. Waterfowl and aquatic vegetation may be observed.

Hatchery Superintendent
Akron State Fish Farm
912 Portage Lakes Drive, Akron 44319
(216) 664-2293

AKRON METROPOLITAN PARK DISTRICT

Due in large part to the nature of the bedrock and a period of glaciation which provided a great volume of meltwater causing stream reversal and deep valley cutting, the Akron area has scenic river and tributary gorges, several of which have been preserved as metropolitan parks. Ten of these sites, encompassing 6,667 acres of land in a highly industrialized region, have been developed for all to enjoy.

The parks are described separately because each has its own outstanding features. All have facilities designed to meet outdoor educational and recreational needs. A number of shelters, ranging from rustic ones with log fireplaces to modern steam-heated halls, are available but require reservations six months in advance. For more information, reservations, or a naturalist's services contact:

Akron Metropolitan Park District
2077 Newton Street, Akron 44305
(216) 733-2213

DEEP LOCK QUARRY METROPOLITAN PARK
191 acres

On Riverview Rd. in Peninsula

This park is named for Lock No. 28, which gave the highest lift of the 42 locks between Akron and Cleveland on the Ohio Canal. The canal runs the entire length of the park. It was important in opening the Ohio country to the west and to settlement of this area. The park is also the site of an early Berea sandstone quarry, one of the oldest in the county. Opened in 1800, the quarry was a source of stone for the canal locks, the breaker walls of Cleveland, and foundations for barns, homes, and bridges.

The present woodland consists of sycamore, tulip, cherry, elm, aspen, and willow growing on soil replaced after the stone was quarried. Many flowers have survived even though the soil was disturbed. This is reported to be one of the best sites for observing spring warbler migration.

Canals, Indian trails, the Cuyahoga River, old wagon roads, railroads, and telegraph wires converge here to mark the site as an historical center of communication.

FIRESTONE METROPOLITAN PARK
250 acres

At Main St. and Coventry Rd., south of Akron

The Tuscarawas River, which played such an important part in river travel in Ohio, is a small stream in this park. The water is unpolluted and many forms of life abound. Swampland and ponds, with the water table very near the surface characterize the environment. Swamp forest of elm, ash, and alder, and oak forest which includes tulip and cherry growing on small hillocks, are typical. The extremely large swamp area supports many species of plants such as white trout lily and green dragon, as well as a great variety of birds during the breeding season.

FURNACE RUN METROPOLITAN PARK
889 acres

On Townsend Rd. in northern Summit County, off the Cleveland-Massillon Rd.

This picturesque park, surrounded by man-made structures and cut by highways, altering the lake and streams, still abounds with many different forms of plant and animal life. The park land generally extends along Furnace Run, a stream with exposures of highly fossiliferous rock. The wooded areas are beech-maple forest with extensive red and Scotch pine plantations; many large sycamores grow along Furnace Run. Oswego tea, northern water snakes, and warblers during migration are notable here. A famous bog iron pond where bog iron (limonite) was dug to feed the furnace on Furnace Run is still discernible.

The Brushwood Area has several trails through many types of habitats.

GOODYEAR HEIGHTS METROPOLITAN PARK
411 acres

East Akron at Darrow Rd. and Newton St.

With topography ranging from steep to rolling land, this park is situated within the city. A 15-acre lake and swamp provide aquatic plants and animals for study. Alder Pond is a relict of past glacial impoundment and has yellow birch, a northern species, growing on its northern edge. The forested hillsides are in beech-maple with tulip, cherry, sassafras, and blueberry scattered throughout. Some parts of the original 50 acres of the park were once used as a rubbish dump. Planted to pines during the Depression years, this area now has many acres of red, Scotch, and white pine forest.

GORGE METROPOLITAN PARK
204 acres

On Front St. between Cuyahoga Falls and Akron

Geologic and pioneer history make this park colorful and picturesque. Below the city of Cuyahoga Falls, the river flows through a narrow constricted gorge with many waterfalls and rapids, descending 200 feet in about two miles. The gorge was cut after the normal river channel southward was blocked by glacial fill. The rock of the gorge is the cliff-forming Sharon conglomerate in massive formation. It was deposited at the edge of the Pennsylvanian sea some 180 million years ago.

Trees on the hillside are of the beech-maple forest type, which includes oak, sour-gum, and cherry. Northern glacial relict vegetation is found in the cool, moist lower levels. The lovely trailing arbutus and other members of the heath family are found here.

AKRON METROPOLITAN PARK DISTRICT (Cont.)

Local history includes stories of Indians who frequented the gorge and occupied the sandstone cavity now known as Mary Campbell Cave. Here the white girl, kidnapped in Pennsylvania, was held captive for several years by the Indians.

The falls for which the city of Cuyahoga Falls was named are now beneath water backed up by the Ohio Edison Company dam. Before the dam was constructed, people came by wagon, train, and streetcar to see this beautiful waterfall.

HAMPTON HILLS METROPOLITAN PARK
278 acres

On Akron-Peninsula Rd., between Steels Corner and Bath roads

This new park is known for its Indian lore, large stand of black walnut trees, bird life, mammals, meandering Adam Run, and an old Western Reserve home. The woodland in the park is in the beech-maple forest association, with tulip and cherry in addition to the walnut. Wildflowers are typical of the beech-maple forest. Adam Run and a pond provide habitat for water plants and animals. The area on which the old Western Reserve home is situated is called "Top of the World." The home is being prepared for use as a museum by the Northampton Historical Society.

KENDALL, VIRGINIA, METROPOLITAN PARK
2,039 acres

On SR 359, Boston Township

The largest of the parks, this one has beech-maple and oak-hickory forests, deep ravines with exposures of the Sharon conglomerate, the basal formation of the Pennsylvanian series, a 12-acre lake, meadows, and swamps. The Sharon conglomerate forms cliffs and ledges and cool coves where glacial relict vegetation may be studied. Large hemlocks, yellow birch, blueberry, orchids, wintergreen, Canada mayflower, and trailing arbutus are some of the plant species in this environment.

Deer, fox, and raccoon are present. The cliffs are frequently used for hawk observation, and the hillsides are outstanding for warbler migration. Twelve miles of well-marked trails lead throughout the park.

O'NEIL WOODS METROPOLITAN PARK
240 acres

On Bath, Shade, and Martin roads

This newest addition to the Akron Metropolitan Park District is largely undeveloped. It is one of the most serene of the parks because of its remoteness from busy highways. New Deer Run Trail winds over former farmlands with rolling topography and finally plunges to the Yellow Creek valley, where it follows the shady banks of Yellow Creek. The trail returns up a long grade past a solitary white pine to its starting point in the parking lot. Wildflowers, and birds during spring migration, are found here in great numbers.

SAND RUN METROPOLITAN PARK
1,040 acres

In northwest Akron on Portage Path, Merriman Rd., and Sand Run Pkwy.

Sand Run was the first, and is the best known, of the metropolitan parks. Situated in the ancient historical center of Summit County, the Sand Run area had an important role as a melting pot or crossroads of civilization in the Cuyahoga River valley. First came the mysterious mound builders; later the Erie, Iroquois, Mohawk, Oneida, Onondaga, Cayuga, Seneca, Shawnee, Delaware, Miami, Wyandot, Chippewa, Mingo, and Ottawa Indians. The high promontories along the river were used as fortifications, and the river terraces as village sites.

Portage Path and the Cuyahoga River Trail were used for centuries as avenues of transportation from Lake Erie to the Ohio River by means of the Tuscarawas and Muskingum rivers.

During the War of 1812, General Wadsworth occupied a flat piece of ground in Sand Run which is known as Old Portage. He was sent there to protect the early settlers from the British and the Indians. Many artifacts were discovered when Mingo Camp picnic grounds was established.

Present use of this area permits wildlife study. The Carolina wrens have made it their year-round home. Along the trails wildflowers bloom in great numbers, especially bloodroot and trillium.

SEIBERLING, F.A., NATURE CENTER
(In Sand Run Metropolitan Park)
100 acres

This addition to the Metropolitan Park District is in the process of development. Its purpose is to acquaint young and old with the natural world. In the Visitor's Center may be found live displays of reptiles, amphibians, fish, and bees. There is a Nature Name Game which is changed seasonally, to help children learn to identify birds, flowers, animals, and trees.

Several trails guide the visitor through the Nature Center area. On Geology Trail various types of rocks are displayed and identified by a number and key folder. Seneca and Erie trails are the preferred nature trails. On Erie Trail during the summer various plants are labelled for easy identification. An arboretum was developed in 1973.

SILVER CREEK METROPOLITAN PARK
486 acres

On Eastern and Medina Line roads

This most southerly of the metropolitan parks was purchased to provide outdoor recreation for the rapidly growing Barberton-Norton area. It is typical hummocky glacial moraine country. In addition to Silver Creek, there are ponds, swampland, farm fields, and a small beech-maple woods. The property will be reforested and the fields returned to woodland by natural succession. The park presently includes a new parking lot, horse trail, and 1.6-mile hiking trail.

BRANDYWINE SKI AND RECREATION CENTER

240 acres

Sagamore Hills in north part of county

Reported to be a beautiful, unspoiled woodland area, this property, though close to urban development, promises to be excellent for field trips. In addition to the mixed hardwood forest, there are a large creek and deep ravines showing outcrops of Mississippian shales and sandstones. Wildflowers grow in profusion, and wildlife, including an occasional deer, may be found.

Extensive hiking trails give interesting access to the numerous habitats. The property runs along the bank of the old Ohio Canal. A mile-long private entrance road gives visiting groups a sense of wilderness and seclusion.

Manager
Brandywine Ski and Recreation Center
Box 343, Northfield 44067
(216) 467-8197

BUCKEYE TRAIL

West Branch - 31 miles East Branch - 7 miles

The west branch follows the water level of the canal and Cuyahoga River until it reaches Sand Run Metropolitan Park, where it climbs to the summit of the canal system in the city of Akron. This is the old Indian Portage Trail.

In the valley, the trail passes through several Akron metropolitan parks, including Deep Lock Quarry Park and Sand Run Park near F.A. Seiberling Nature Center.

For maps and further information contact:

Buckeye Trail Association, Inc.
P.O. Box 254, Worthington 43085

CAMPS JULIA CROWELL AND HILAKA

345 acres

On SR 303 and Oviatt Rd., West Richfield

These adjacent campsites were developed on rugged terrain, the topography a result of glaciation and stream erosion. There are two lakes, streams, and ravines showing outcrops of the shales and sandstones of two periods of geologic time, the Mississippian and Pennsylvanian. The basal Sharon conglomerate is seen in some places.

Wooded areas have a mixed oak forest type with many species present. Wildflowers may be observed seasonally, and birds and small mammals are abundant. Marshes and meadows provide additional habitats. Hiking trails lead to the choice field trip areas, which include the highest point in Summit County.

Camping Director
Lake Erie Girl Scout Council
1001 Huron Road, Cleveland 44115
(216) 241-3180

CAMP MARGARET BATES

125 acres

On SR 631 west of Macedonia

A variety of habitats may be examined on this thickly coated, glaciated, upland property. A lake, a stream, open fields in natural succession and segments of woodland provide the ecological environment for vegetation and animals. The camp is best adapted to day outings or field trips on weekdays during spring, fall, and winter months.

Camping Director
Lake Erie Girl Scout Council
1001 Huron Road, Cleveland 44115
(216) 241-3180

CYO CAMP CHRISTOPHER

160 acres

In Bath township, northwest of Akron

This camp, with its outstanding natural features, is reported to be ideal for outdoor education experiences. It lies in the Cuyahoga River watershed on glaciated land which has been deeply eroded by a number of streams. Cliffs and ledges of Mississippian or Pennsylvanian age rock formations make an interesting geology story. Picturesque overhangs and a natural bridge have resulted from erosional differences in a resistant layer of sandstone.

Sections are heavily wooded in the mixed oak forest type. Wildflowers abound in the spring. Four ponds provide study areas for aquatic plants and animals.

A winterized lodge may be reserved during spring and fall months.

Manager, Camp Christopher
138 Fir Hill, Akron 44304
(216) 762-9174

HALE FARM AND VILLAGE

170 acres

On Oak Hill Rd., Bath Township. Follow signs from I-77 at Wheatley Rd. exit, or from I-271 at SR 303 - Richfield-Peninsula exit

An authentic historical farm and a recreated village typical of the mid-1800s provide the basis for a truly significant educational experience. The farm is nicely removed from the nearby metropolitan areas, nestled in a wide valley cut by a capricious small stream through the glaciated plain and the Mississippian sandstones and shales below. The wooded hillsides are hardwood forest, partially virgin and relatively rich in the flora and fauna of the region.

The story of Jonathan Hale, the hearty Connecticut pioneer who came to Ohio in 1810, is delineated in his accomplishments and those of his successors as they are evidenced on the Hale property in the red brick house, the early barn with its craft shops, the blacksmith shop and even the majestic white pines, spruces, and tamaracks planted soon after settlement.

Across the road is the restored Western Reserve village, all original buildings moved from various places in the Western Reserve to tell the story of development. These include a log school house, a law office, a meeting house, a grist mill, and a number of original homes all furnished in the rigorous New England way.

Guided tours through the buildings, an opportunity to see cattle, horses, pigs, geese, and sheep in pastures, fields of Indian corn, flax, wheat, and pumpkins, to watch craftsmen at work and see their finished products—these are the basic experiences.

This rich and rugged heritage of the early settlers of the Western Reserve is preserved through the efforts of the Western Reserve Historical Society of Cleveland. Fees are reasonable.

Manager
Hale Farm and Village
P.O. Box 253, Bath 44210
(216) 666-3711 - Akron
(216) 861-4573 - Cleveland

NIMISILA RESERVOIR

1,225 acres

Off SR 619 or 93, south of Akron

This large reservoir gives access to the study of a wide variety of trees and wildflowers, waterfowl, shorebirds, and many other aquatic plants and animals. North of East Nimisila Road and east of Christman Road is an open bog meadow containing remnants of sphagnum, shrubby cinquefoil, blazing star, fringed gentian, orchids, and other relatively rare plants. These are associated with two kettle holes resulting from glaciation.

The wooded areas are primarily in the mixed oak forest group and give shelter to hawks, raccoons, and other species of wildlife.

Park Manager
Portage Lakes State Park
5031 Manchester Road, Akron 44319
(216) 644-2220

PORTAGE LAKES STATE PARK

2,435 acres

On SR 93 and 619

Artificial lakes comprising over 2,000 acres were created as the summit reservoirs for the Ohio-Erie Canal. The area is glaciated, lying in the wide kame and outwash belt deposited within and at the edge of the wasting glacier.

The terrain is gently rolling and sections are covered with beech-maple forests. The water and marsh areas give food and protection to numerous kinds of waterfowl as well as other animals and plants.

Field trips are recommended for the months of April through October.

Park Manager
Portage Lakes State Park
5031 Manchester Road, Akron 44319
(216) 644-2220

REVERE SCHOOL LAND LABORATORY

6 acres

On Everett Rd., Bath

Hiking trails have been established through the woodland and along a stream adjacent to the school. The stream is polluted, but during rainy periods, frogs, turtles, and snakes are present. Wildflowers, small mammals and birds may be found among the mixed oak forest type trees, which provide a good variety for study. Visits are encouraged, but not picnicking.

Assistant Superintendent
Revere Local School District
3496 Everett Road, Bath 44210
(216) 659-6111 - Richfield
(216) 535-2154 - Akron

TAMSIN PARK

100 acres

On SR 8 at SR 532

Tall trees in a hardwood forest and two small lakes at this campground provide a good physical environment for studying water and woodland wildlife. Of interest to many school groups is a museum depicting the culture of living American Indians. A guide and lecture suited to any age level are available without charge during spring and fall months. An admission fee is required for the American Indian Art Hall of Fame.

Manager
Tamsin, Inc.
Route 1, Peninsula 44264
(216) 653-8324

TWINSBURG LAND LABORATORY
17 acres

Wilcox School

A trail along Tinkers Creek winds through wooded thickets, a swampy area and across a small stream. Since the terrain is varied, it lends itself to a great variety of plant and animal life.

Tinkers Creek is in a deeply entrenched valley with a thick deposit of sand and gravel. The underlying rocks are Mississippian sandstones and shales. A winter walk along the trails tells the geologic story as well as revealing evidence of deer, raccoon, opossum, squirrel, chipmunk, and mice. Winter birds as well as migrating birds find food and shelter in the valley.

Principal
Wilcox School
9198 Darron Road, Twinsburg 44087
(216) 425-7116

TRUMBULL COUNTY

ANDERSON PARK
10 acres

On Palmyra Rd., Warren

This city park has limited nature study possibilities. However, trees of the oak-hickory forest type are scattered throughout most of the area. The region has been glaciated; it is underlain by the shales and shaly sandstones of Mississippian age recognized as the beginning of the Allegheny Plateau province. The soil's normal acidity is reflected in the vegetation of the region.

The proximity to the Mahoning River, whose valley indicates a glacial meltwater drainage system, adds to the study possibilities. The fill in the valley indicates that Warren lies near the headwaters of an old Teays stage (preglacial) stream. An observation of these and other natural features could serve as a challenge for a field trip.

Trumbull County Metropolitan Park Board
P.O. Box 106, Warren 44401
(216) 399-2727

CAMP SUGARBUSH
190 acres

On SR 5 at Kinsman

This Girl Scout camp is situated on the glaciated, rolling Allegheny Plateau along Pymatuning Creek. The area lies on Ohio shale, a formation of Devonian age. The Berea sandstone is reported to be present in a thin formation in the hilltops.

The camp contains wooded areas which include sugar maple, beech, the oaks, and hickory. The fields in natural succession and the creek provide, with the woodlands, the three major habitats for plants and animals. Hiking trails lead through the woods and along the stream.

A winterized lodge may prove helpful for school field trips or camping during spring and fall months.

Camping Director
Lake to River Girl Scout Council
55 South Main Street, Niles 44446
(216) 652-5877

GRAND RIVER STATE WILDLIFE AREA
5,187 acres

At junction of SR 88 and 534

The wildlife area lies on the floor of the Grand River floodplain. The land is predominately flat, with scattered knolls. Soils are acid and poorly drained. Timbered areas are composed of swamp forest species with elm, ash, soft maples, pine, and swamp white oak.

The southern portion of this large acreage contains some beech-maple woodland and others in the association. This is an excellent area for observing spring wildflowers.

There are five impoundments, several streams and the Grand River to attract a variety of waterfowl in the spring and fall. Mallard and wood duck commonly nest here. Beaver are active; a beaver dam with a large lodge is found at the north end of the property. Grouse, woodcock, squirrel, deer, pheasant, and furbearers are seen frequently. This area is unusually good for ecological studies.

Area Manager
Grand River State Wildlife Area
Route 1, West Farmington 44491
(216) 849-2175

HIGHLANDS CAMP

365 acres

2 miles north of Mesopotamia

Situated advantageously in the heart of the historic Western Reserve, on rolling land of a glacial end moraine with Ohio's beautiful beech-maple forest association dominating the woodlands, this camp has much to offer. Much of the land is heavily wooded and contains the abundance and variety of wildflowers typical of the region. Interspersed are open fields and a manmade lake. A sparkling creek runs through the property suggesting "creek walks" where campers can examine the rounded rocks carried by the glacier from Canada, and watch the salamanders, frogs, water striders, and other tiny animals of a water habitat.

Some of the hiking trails are broad, having been used formerly as the only north-south roads in the 1800s and later as farm roads but now permitting nature hikes where many students can gather to examine natural objects along the way. The first cemetery in the Western Reserve, burial place of Hezekiah Sperry and his wife, is located here.

Three winterized lodges, shelterhouses, and a large barn floor can accommodate school resident camping as well as field trips.

Robert Eakins, Manager
Highlands Camp
Mesopotamia 44062
(216) 693-3531

MOSQUITO STATE PARK AND MOSQUITO CREEK RESERVOIR STATE WILDLIFE AREA

11,857 acres

At SR 46 and 305, north of Warren

Mosquito Creek, draining a large area of the glaciated, rolling to flat Allegheny Plateau, has been impounded to form a lake covering 7,850 acres. The park extends along the south end of the lake where vegetation of the beech-maple forest type is present. The site is not heavily wooded, however. A swamp area and old fields in succession are possible study areas.

The wildlife area extends all around the lake. The adjacent land is flat with acid soils which are poorly drained, a result of the glacial drift being high in clay content. A large variety of waterfowl frequent the area in spring and fall. A goose management program was started in 1957; geese now nest here and produce hundreds of goslings. Wood ducks and mallards nest here also. This is an excellent location to study shorebirds during the fall when the water level is low and exposes vast mud flats. Eagles and osprey are seen occasionally, and African cattle egret and glossy ibis have been observed. The management practices for fish, wildlife, soil, and water make an interesting study.

Park Manager
Mosquito State Park
Route 3, Cortland 44410
(216) 637-2856

Area Manager
Mosquito Creek Reservoir State Wildlife Area
Route 1, Lockwood 44435
(216) 637-2856

SCIENCE AREA AT MINES

55 acres

Adjoining H.C. Mines Elementary School, 850 Howland-Wilson Rd., Warren

This well-planned, well-used land laboratory makes transportation problems minimal for the schools in the Howland Local School District. Fifty different classes from six elementary schools and a summer high school field biology course make effective use of this diverse outdoor education area.

The major habitats are a mixed-aged deciduous forest, largely beech, maple, and oak with a rich understory; a small stream flowing through part of the property; and approximately 32 acres of once-cultivated fields in various stages of succession.

A well-defined nature trail, extending approximately one mile, forms a loop which provides many varied teaching situations.

This site has been under development for several years. The manager and teachers may have valuable experiences to share with others interested in the area.

Administrative Assistant in charge of Instruction
8200 South Street, SE, Warren 44484
(216) 856-5971

WARREN SCHOOLS LAND LABORATORY

78 acres

At junction of Co. Rd. 159 and 196

This property is situated along a small stream and contains swampland and a farm pond which are excellent for aquatic wildlife study. It contains school gardens, a greenhouse, an orchard, grassland, brushland, and plantings of Scotch pine. In addition, a mixed hardwood deciduous woodland may be explored. Conservation features of drainage by tile, sod waterway, and irrigation may be observed.

Recent additions to the program have been the development of a nature trail, a baby farm animal zoo, and a soils profile pit. The land laboratory is used during the summer months for recreation appropriate to the land use plan.

Visits by classes planning to hike the trails or observe the program are limited to Tuesday and Wednesday afternoons.

Director of Vocational Education
Warren City School System
261 Monroe Street, NW, Warren 44483
(216) 637-3153

TUSCARAWAS COUNTY

BEACH CITY RESERVOIR

Land - 930 acres Water - 420 acres

On US 250, 3 miles northwest of Strasburg

The dam creating this reservoir was built on Walnut Creek, a tributary of Sugar Creek, which joins the Tuscarawas River. Most of the impounded water and land lies just beyond the boundary of glaciation. The glacier was responsible for many changes in drainage and filled the valleys with much outwash sand, silt, and gravel. The underlying rock formations are in the Pennsylvanian series, which includes the Upper Mercer limestone and black flint with the Massillon sandstone forming the walls. Trailing arbutus, laurel, and pine cherry are reported to be associated with outcrops of the Massillon formation in the area.

The lake supports many species of waterfowl, and the marsh areas on the edges are rich in aquatic organisms. The cool, moist environment of narrow ravines and north slopes has encouraged the persistence of hemlock, northern birch, and maple. The beech-sugar maple forest type is found in the association.

Facilities are limited to those at the roadside park.

Muskingum Watershed Conservancy District
1319 Third Street, New Philadelphia 44663
(216) 343-6647

BUCKEYE TRAIL

16 miles

From Bolivar to Sherrodsville

The trail of the blue blazes follows the Ohio Canal towpath along the Tuscarawas River past Bolivar "dry" dam, four canal locks, historic Zoar, and Fort Laurens. This area has typical lowland ecology: soft maples, elm, wetland wildflowers, and glacial stream features. The next six miles follow an abandoned grade of the Wheeling-Lake Erie Railroad (private property), through the wide valley of Conotton Creek. Second growth lowland species of trees are evident as well as some remaining virgin oak, sugar maple, and hickory. Ohio woodland bird species are present, encouraged by feeders placed along the trail.

The last eight miles of the trail ascend and descend valley hillsides, passing Atwood Lake and going to Leesville Lake on county and township roads. Rolling farmland, upland woodlots, and conifer plantations are the typical environments in view.

Camping and picnicking facilities are available at Atwood and Leesville dams.

For maps and further information contact:

Buckeye Trail Association, Inc.
P.O. Box 254, Worthington 43085

CAMP ZIMMERMAN

300 acres

On Co. Rd. 183, 4 miles south of Gnadenhutten

Set in the rolling hills near the broad valley of the Tuscarawas River, this site has an interesting combination of environmental features. The wooded hillsides and ravines are in the oak-hickory forest group, typical of the unglaciated areas of Ohio where residual, thin, acid soils predominate.

The area contains a strip mined section; the rock wall, lake, reforestation, and soil problems provide good study possibilities. The rock formations are in the Pennsylvania age series, the Middle Kittaning coal lying near the tops of the hills. An oil well is present also.

The camp has accommodations for 50 persons in unheated buildings.

Ernest Murphy, Manager
Camp Zimmerman
East Ohio Conference of the United Methodist Church
126 Spring Street, Gnadenhutten 44629
(614) 254-9271

DEVIL'S DEN PARK

275 acres

On Co. Rd. 13, south of Gnadenhutten

A site of tremendous scenic quality due to its geologic history, this park is also rich in vegetation and wildlife. The land lies on the highly dissected Allegheny Plateau in an unglaciated part of Ohio. The soils are residual and acid, with the associated oak-hickory forest type, typically containing walnut, maple, sassafras, and many other species. Many wildflowers are present, and the place is reputed to have 32 varieties of ferns. Many of these are associated with the rock formations and the large gorge found on the property. Resistant sandstones form overhangs, and the head of the ravine boasts a natural sandstone bridge where water flows through and plunges to a depth of 60 feet. A four-acre spring-fed lake is the source of the water which cascades over the rocks. The area is rich in Indian and pioneer legends which are recorded in Zane Grey's *The Spirit of the Border.*

The campgrounds are open from May to October. Field trips may be arranged for other times.

R.A. Schmittle
Route 2, Tippecanoe 44699
(614) 498-7254

DOVER RESERVOIR

Land - 490 acres

On SR 800, 5 miles north of Dover

Dover Dam, constructed on the Tuscarawas River, is an "almost dry" dam. The water conservation pool is small, covering an area of 350 acres. The stilling basin lies on a four-foot layer of hard limestone underlain by shale. This is the Lower Mercer of the Pottsville formation, Pennsylvanian in age.

The area is unglaciated but the river was subject to stream reversal by glacial blocking and the old valley was deeply filled with outwash silt, sand, and gravel.

The area around the pool is mostly wooded in mixed hardwoods of the oak-hickory forest type with elm-ash swamp forest in the lower parts.

Muskingum Watershed Conservancy District
1319 Third Street, NW, New Philadelphia 44663
(216) 343-6647

FORT LAURENS STATE MEMORIAL

81 acres

On SR 212, one-fourth mile south of Bolivar

The site of Fort Laurens, on the west bank of the Tuscarawas River, is a reminder of the storied battlegrounds of the Revolutionary War. This one tells of starving men, hostile Indians, and a hard winter at a frontier post established as one of several bases to reach the British controlled area on the north. The old fort now has the abandoned Ohio Canal running through the property.

Part of the area remains wooded in the oak-hickory forest type with wildflower growth beneath the canopy. The area is unglaciated but lies only two miles beyond the Wisconsinan glacial boundary. The river shows valley fill of outwash sand and gravel and modifications in flow due to the ice sheet.

A small site museum concerned with Ohio's role in the Revolutionary War is located in the area. A small charge is made to visit the museum.

The Ohio Historical Society
Columbus 43211
(614) 466-4663

SCHOENBRUNN VILLAGE STATE MEMORIAL

171 acres

On US 250 just south of New Philadelphia

This is a reconstructed Moravian Indian settlement originally established in 1772. It is significant as a memorial to the efforts of Moravian Church missionaries who gave to the Indians the basic tenets of the Christian faith, education, and hygiene without attempting to "westernize" their Indian charges. The settlement was abandoned in 1777 due to the hostility of both Indians and settlers. The diaries of the missionaries contained valuable descriptions of the virgin country and Indian tribes which inhabited it on the eve of American settlement. A church, schoolhouse, and 14 other structures, a museum, and a trading post may be examined.

Approximately half of the area is wooded with the original mixed oak-hickory forest type retained in its natural condition. An illustrated booklet, *Schoenbrunn and the Moravian Missions in Ohio*, may be obtained at the site or from the address below.

The area is open April through October.

The Ohio Historical Society
Columbus 43211
(614) 466-4663

SNYDER CONSERVATION FARM

367 acres

On SR 258, 7 miles south of Newcomerstown

Working with the Soil Conservation Service, the owner of this farm has introduced many conservation practices into his operation. Contour strip-cropping on the rolling, unglaciated land is highly advantageous to curb erosion. In addition, emphasis is placed on increased fertility of the soils and reforestation. Woodland acreage of 150 acres includes the old woods, white and red oak primarily, and plantings of white pine, tulip, white oak, Norway spruce, and walnut.

Wildflowers, birds, small mammals, and deer are found here. Three springs have been developed and many acres returned from natural succession to farmland and pasture. One thousand white pine trees have been planted recently in these areas.

For a vocational agriculture tour, the owner suggests guide service should be supplied by the teacher.

Robert P. Snyder
Route 1, Newcomerstown 43832
(216) 498-8907

ZOAR LAKE STATE WILDLIFE AREA

43 acres

Off SR 212 at Zoar

This small area around a 15-acre lake is of interest historically. It was called Lime Kiln Lake because of an old lime kiln that once existed in the lake bed. The probable lime source was the Lower Mercer limestone of the Pottsville formation, Pennsylvanian in age, which outcrops not far above stream level.

The lake attracts a few species of waterfowl during migration; rabbit, quail, and furbearers are common. Fish management practices may be observed here.

Division of Wildlife District 3 Office
912 Portage Lakes Drive, Akron 44319
(216) 644-2293

UNION COUNTY

AMERICAN LEGION MEMORIAL PARK

27 acres

Off US 33 on north edge of Marysville

Within walking distance of some Marysville schools is a beautifully wooded park with large mature hardwood trees, good understory shrubs, a meandering stream, and many wildflowers. The park pathways are broad and the total area well used, but the potential for discovery and awareness of much important natural history is here nonetheless.

The rolling topography is due in part to the downcutting of Mill Creek as it flows to the Scioto River and in part to the Powell end moraine which sweeps in an arc through Marysville to the southeast. This hilly topography marks a point where the Scioto lobe of the last glacier stopped for a long period of time. The wasting ice left the rock rubble in its present position.

Water life and chemistry as well as geology, trees, flowers, and birds could serve here as the basis of a long-term outdoor teaching project for the teacher who realizes the value of outdoor work with students.

Manager
American Legion Memorial Park
Marysville 43040
(513) 642-8348

CAMP RADAWOOD

15 acres

Off US 33, one-half mile north of Marysville

This small camp boasts a little lake and a wooded area. The trees are in the beech-maple forest type with many others in the association. The topography is rolling due to the glacial till deposits of the Powell moraine.

Hiking trails have been developed, giving access to good study areas.

Camping Manager
Central Ohio Council, Boy Scouts of America
1428 East Broad Street, Columbus 43215
(614) 253-5513

RICHWOOD LAKE PARK

25 acres

At Richwood

An artificial lake made by impounding a small tributary of the Scioto River provides the focal point for this little park. The land is gently rolling to flat, a part of the great glacial till plain characteristic of western Ohio. Trees are mixed hardwoods with some ash, elm, and cottonwood, typical of low-lying areas. The park is primarily for recreation but provides environmental studies proportionate to a teacher's ingenuity.

Manager, Richwood Park
101 South Franklin Street, Richwood 43344
(614) 943-2422

TRANSPORTATION RESEARCH CENTER

8,300 acres

On US 33 southeast of Bellefontaine, in both Logan and Union counties

This huge transportation research center was built with the most modern facilities that money and technology could buy for testing all types of ground transportation vehicles and related instruments as well as collecting data. A high-speed test track on a 7½-mile oval was designed to test wide speed ranges. A 50-acre blacktop pad provides a space for safety testing vehicle handling, brakes, suspension systems, tires, and other components to the limits of performance. A device capable of simulating crashes to speeds of nearly 100 miles per hour and over 100g's (the pull of gravity) with data collection, reduction, and analysis of test results is now operational.

These exciting devices designed to add to the speed and safety of transportation are in distinct contrast to the near virgin maple forest which enhances 52 acres of the TRC property. Huge maples and a sugar bush, no longer in use, with old roadways to follow through the rich herbaceous understory, provide students with an opportunity to compare and evaluate the merits of modern technology and the native forests which were a part of their original heritage.

Public Relations Director
Transportation Research Center, East Liberty 43319
(513) 666-2011

VAN WERT COUNTY

HIESTAND WOODS PARK

20 acres

Off SR 127 on Hospital Dr.

This choice little park situated beside a golf course and a city reservoir is an oasis for nature study. Large oaks and honeylocust trees predominate in the developed picnic area. Pileated woodpeckers as well as many other birds may be seen. An undeveloped area has hiking trails through the woodland and along a stream. Recommended use is from May through September.

Van Wert Area Jaycees
P.O. Box 21
Van Wert 45891

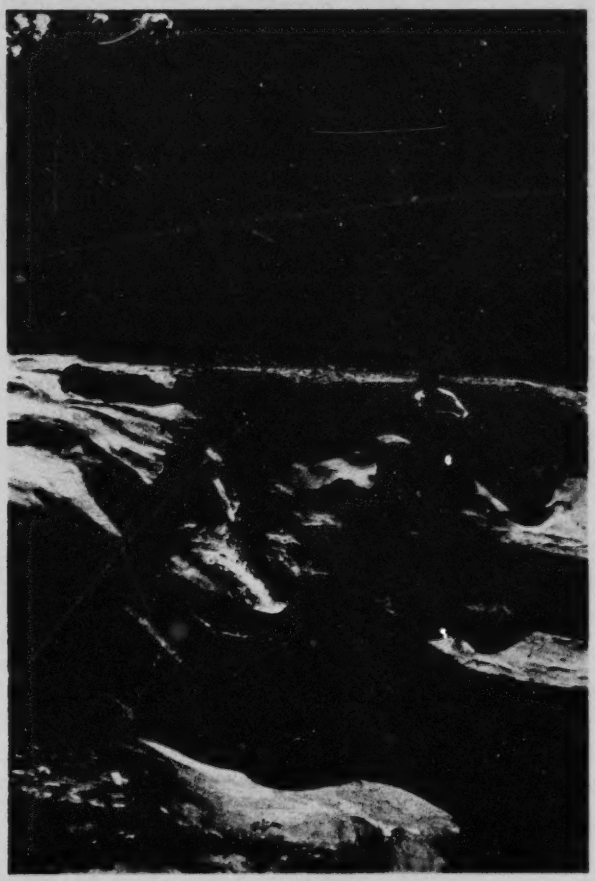
VINTON COUNTY

BUCKEYE TRAIL

12 miles

From Tar Hollow State Park through Eagle Mills to the Hocking County line near Ash Cave

This small segment of the trail extends across the northwest corner of the county. It travels along the rugged hills and valleys made by normal stream dissection and the glacial stream reversal of Salt Creek. The sandstones and shales of Mississippian age are exposed in the valleys and



ravines. It passes through three forest types: the bottomland hardwoods of the old Teays preglacial valley, the mixed mesophytic, and the oak-hickory association.

For maps and further information contact:

Buckeye Trail Association, Inc.
P.O. Box 254, Worthington 43085

COMMUNITY CAMP

1,500 acres

On SR 328, 3 miles south of New Plymouth

As a weekend retreat and a summer haven for many city children, young people, and families, this large acreage provides the basis for exciting experiences. The geologic story is told in the mature streams and rounded hills, with sandstone rocks of Pennsylvanian age exposed in places to form ledges and overhangs. Springs seep out below shale levels where water cannot penetrate; fossils are found, ceramic clay is available, and signs of strip mining for coal are still visible. Eroded ravines, rich flood plains, and creeks, one of which is impounded to form a small lake and marsh area, are other environmental features. The many wooded acres of mixed hardwoods shelter flowers, birds, and small animals.

Known pioneer history goes back to 1703. An Indian dumping ground with broken tools and evidence of the Morgan Raiders Trail are additional attractions.

Old farmsteads, barns, a new showerhouse, several shelter houses, and campsites constitute the living accommodations. A family ranch provides tent-trailer spaces. An area is set aside for reproducing the folk arts and crafts of the southern Ohio hills. Naturalist trail guides and tour guides are available upon request.

Director, Community Camp
4965 North High Street, Columbus 43214
(614) 846-6600

LAKE ALMA STATE PARK

231 acres

On SR 349, 1 mile north of Wellston

A dam on Little Raccoon Creek created Lake Alma, which covers approximately 60 acres. The land surrounding the lake is heavily wooded with oak-hickory forest, making a good study area of woodland and water habitat. It provides secluded campsites also.

The rolling hills are underlain by the Pottsville formation of limestone, coal, and shales, Pennsylvanian in age. Soils are variable but typically thin and acid. Good studies of rock, soil, topography, and vegetation relationships are possible.

Park Manager
Lake Alma State Park
Box 42, Wellston 45692
(614) 384-4474

LAKE HOPE ENVIRONMENTAL RESOURCE CENTER

7.2 acres

Off SR 278 in Zaleski State Forest, 6 miles south of junction with US 56, west of Athens

The Department of Natural Resources (DNR) uses the Environmental Resource Centers at Lake Hope and Shawnee (see Scioto County) to familiarize educators with the methodology of environmental education and to provide a practical workshop for teachers to work with their

students in a rich environmental setting. DNR's environmental education section emphasizes a variety of widely recognized approaches to environmental education, and provides a comprehensive survey of DNR facilities and personnel and program resources.

Before teachers may conduct their own programs with students at the resource center (which has no teaching staff), school staff representatives must attend one of these workshops. Arrangements can be made for DNR personnel to visit schools to provide detailed information about the program for teachers wishing to use the center.

The center is fully equipped to accommodate resident programs. The physical plant includes three buildings: a dining-recreation complex, a three-wing dormitory (each wing capable of housing 20 students), and a conference building with multiple class areas and a dark room. The full-size indoor gymnasium is suitable for physical fitness programs or indoor recreation. Separate living quarters for instructors are available. The center is also prepared to provide balanced, preplanned meals. A small stream, fire towers, and pine plantations are in the vicinity, and the resources and facilities of Lake Hope State Park and Zaleski State Forest are close by.

The center is open throughout the year. However, the Youth Conservation Corps (YCC) program makes full use of the facility from mid-June through August.

Manager
Lake Hope Environmental Resource Center
Zaleski 45698
(614) 596-5231

Ohio Department of Natural Resources
Environmental Education Section
Fountain Square, Columbus 43224
(614) 466-5884

LAKE HOPE STATE PARK AND ZALESKI STATE FOREST

Park - 3,103 acres Forest - 25,734 acres

On SR 278, northeast of McArthur

Rich in history, wildlife, and vegetation, as well as being scenic and removed from highly concentrated populations, Zaleski State Forest and Lake Hope State Park are excellent for field trips and recreation.

Acquisition of this rugged, wooded terrain began in 1926; the park was started in the early 1930s. The forest was named for Peter Zaleski, a French banker who initiated the smelting of iron in the area. Only the Old Hope Furnace remains today to tell the story of his exploits.

The forest is primarily oak-hickory type with tulip growing on well-drained, fairly open places. In addition, there are large plantations of pines. The animal population of birds, deer, and other small mammals is high. Wild turkey were reestablished quite successfully in recent years. Wildflowers on the forest floor are abundant.

Raccoon Creek and its small tributaries are responsible for the highly dissected terrain, underlain with the coals, sandstones, shales, and limestones of Pennsylvanian age. The fire tower at Atkinson Ridge may be used to observe the topography as well as to understand its use in forest protection. Waterloo Forest in Athens County was made a part of this property in 1969.

Lake Hope State Park, though one of the older ones in the state, remains a favorite. It contains the Old Hope Furnace and shares the wildlife and wildflower populations found in Zaleski State Forest. A large lake contributes scenic value and affords a good body of water for studying acid mine water drainage problems.

The park contains a beautiful rustic lodge built from the sandstone and timber of the area, winterized sleeping cabins, a dormitory, and housekeeping cabins. A nature center and program are operated during the summer months.

Park Manager
Lake Hope State Park
Zaleski 45698
(614) 596-4300

Forest Ranger
Zaleski State Forest
Zaleski 45698
(614) 596-5781

VINTON COUNTY EPISCOPAL CAMP

565 acres

On SR 160, near Hamden

This retreat is situated in rolling hill country covered with trees. These are in the oak-hickory forest type with many other trees and species of wildflowers present. Several old strip mines provide a good study of natural succession after severe disturbance. Rock exposures show typical Pennsylvanian age formations of limestone, sandstone, shale, and the Lower Mercer or No. 3 coal which was mined in this region.

Deer, grouse, rabbit, raccoon, and birds may be observed. A man-made lake, stocked with bass, bluegill, and catfish, could be studied as well for other animal and plant organisms. Hiking trails have been developed and areas are available for field trip lunch stops.

The Rev. Albert H. MacKenzie
Director-Vinton County Episcopal Camp
541 Second Avenue, Gallipolis 45631
(614) 446-2483

VINTON FURNACE EXPERIMENTAL FOREST

1,200 acres

Off SR 93, 3½ miles east of Dundas

The Mead Corporation in cooperation with the U.S. Forest Service has been conducting research on this area since 1952. All the timber on the large tract was originally cleared for making charcoal. The charcoal then was used to smelt iron ore. Some of the best iron in the world flowed from Ohio furnaces until a richer source was discovered in Michigan and Minnesota.

The thousands of acres of clear-cut land now have timber approaching 100 years. The present research program is designed to provide information about the selection of species and the best methods of cutting and seeding on the varied soils and topography of southern Ohio. A field trip to observe and study the results of the research by groups or classes at the high school or college level may be arranged.

Herbert L. Morgan
The Mead Corporation
Chillicothe 45601
(614) 772-3422

WARREN COUNTY

BART'S WILDLIFE RECREATION CAMPGROUND

19 acres

On Spring Valley Lake adjacent to Spring Valley State Wildlife Area

This site with its campground and picnic facilities is listed for convenience in visiting or studying the state wildlife area. Waterfowl, shorebirds, and songbirds may be observed from the site. Nature hikes may be scheduled with a naturalist. Rowboats are available for water studies.

Bart's Wildlife Recreation Campground
Spring Valley Lake, Route 1, Waynesville 45068
(513) 488-2483

BUCKEYE TRAIL

29 miles

From Loveland through South Lebanon and Corwin to Spring Valley Lake

The trail follows the Little Miami River northward through Warren County, passing an area of oak-sugar maple forest. Several camps are located along the route, including Camp Kern, Camp Swoneky, and Camp Wy-Ca-Key. The trail also passes Fort Ancient State Memorial and Caesar's Creek State Park. (See descriptions following).

For maps and further information contact:

Buckeye Trail Association, Inc.
P.O. Box 254, Worthington 43085

CAESAR CREEK STATE PARK

Under development

Off I-71 on S.R. 73 near Harveysburg

Recently acquired from the Corps of Engineers, Caesar Creek is little developed at the present time. The reservoir was constructed on Caesar Creek near its confluence with the Little Miami River. The deep valley of Caesar Creek gorge is carved out of Richmond and Maysville Ordovician limestones. The dominant forest association is that of beech-maple. See Nature Preserve section of this book for a more detailed description of Caesar Creek State Nature Preserve.

District Supervisor
Ohio State Park District 5 Office
Route 1, Wilmington 45177
(513) 289-2107

CAMP GRAHAM

70 acres

Off SR 350 on Clarksville Rd., one-fourth mile north of Clarksville

This 4H camp is situated on Todd Fork, a tributary of the Little Miami River. It lies just west of the edge of Wisconsinan glacial deposits in the Illinoian till. The property has been deeply eroded by the stream, exposing Ordovician age strata with fossils. It is mostly woodland of mixed oak type with hiking trails developed throughout.

The camp has a lodge and 14 sleeping cabins which are not winterized. Day outing or field trips may be arranged.

Camp Manager, 4H
Extension Office
Box 217, Lebanon 45036
(513) 932-1891

CAMP JOY EDUCATION CENTER

315 acres

Off SR 322 on old 3C Highway, which leads to Clarksville

In response to a need to provide outdoor programs for children in the greater Cincinnati area regardless of income, race, or religion, a board of interested citizens has established this center. The major goal is to offer year-round programming which will enrich and strengthen the regular school curriculum for better relations in a multi-racial society. Outdoor living and activities are directed by a well-trained and experienced staff, together with at least one school teacher.

The camp setting and appointments, too, furnish physical and biotic environments which enhance the program. The camp is situated on morainic hills and valleys where Little Todd's Fork, a tributary of a tributary of the Little Miami River, shows stream erosion and deposition and exposes Ordovician fossiliferous rocks. Gravel deposits and glacial rocks in the stream help tell the geologic story. A beech, hickory, maple, and oak forest with a rich understory, fields in succession, and a one-acre pond provide habitats for studying diverse plant and animal life.

Near Fort Ancient, the camp property naturally shows some evidence of the early concentration of Indians in the area. Many other resources in the vicinity, such as Wilmington College, Cowan Lake, museums, farms, and cemeteries, can contribute to the enrichment of children's lives.

Field trips, day camping, or resident camping with winterized facilities are offered.

Executive Director
Camp Joy Resident Education Center
Box 177, Clarksville 45113
(606) 628-3014

CAMP KERN

410 acres

On SR 350 west of Fort Ancient

One of several camps situated along or near the Little Miami scenic river, this one has all the features and habitats advantageous to outdoor education programs. Several schools are taking advantage of these assets.

The area lies within the boundary of Illinoian glaciation, covered with well-weathered till. It is located in what is termed "the Cincinnati arch or anticline," an area subjected to regional uplift, which, after millions of years, has exposed rocks of Ordovician age, the oldest in the state. These rocks contain an abundance of fossils. A deserted farm, the property contains fields in natural succession, two ponds for aquatic plant and animal study, a good woodland of mixed oak forest type, and an excellent display of wildflowers and shrubs.

Birds and mammals are typical of the region. Fort Ancient, with its museum and mounds, is within hiking distance.

The camp, accommodating 150 people, is completely winterized for year-round use. A full time outdoor education director is responsible for program development.

Manager, Camp Kern
Dayton YMCA
117 West Monument Avenue, Dayton 45402
(513) 299-8950

CAMP SWONEKY

180 acres

On Middleboro Rd., Exit 30 from I-71

Situated on the east side of the Little Miami River valley, this camp has many scenic features. Mature forest and ravines show outcrops of Ordovician shales and limestones. The trees are the mixed oak forest type with an understory of shrubs and wildflowers.

Hiking trails have been developed. Three winterized buildings housing 60 persons are available.

Director, Camp Swoneky
Salvation Army
114 East Central Parkway, Cincinnati 45210
(513) 241-8300

CAMP WY-CA-KEY

125 acres

On Moore-Sour Rd., via SR 123 and Gilmore Rd., southeast of Lebanon

Winter camping and field trips are possibilities on this property. An old farm, the camp is rich in the three major habitats: open field in natural succession, woodland of the mixed oak forest type, and a lake for the study of aquatic plants and animals.

The area is located on Illinoian glacial till between two lobes of deposits by the Wisconsinan or latest glacier. The Miami lobe is on the northwest and the Scioto lobe is to the northeast. The terrain is rolling to flat east of the Little Miami River valley.

A farmhouse and lodge are winterized and will accommodate 60 to 70 persons in cold weather. Five cabins are not winterized. Reservations may be made for day use or school camping.

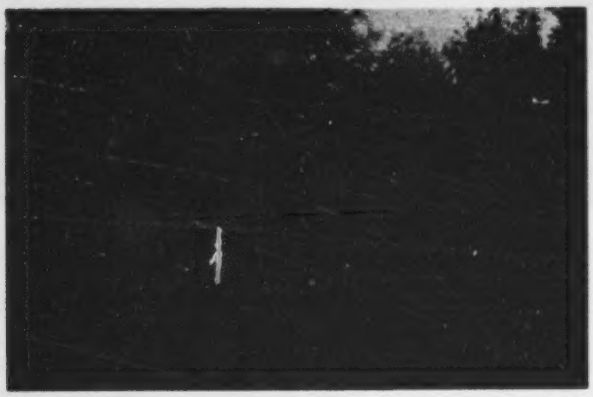
Camp Manager, Dayton YWCA
141 West 3rd Street, Dayton 45402
(513) 461-5550

FORT ANCIENT CANOE TRAILS

111 acres

On SR 350 next to Fort Ancient

Guided environmental education floats on the scenic Little Miami River are offered by Bob Morgan, a pioneer in outdoor education. The trip may extend over a few hours or a few days. The basic trip begins at the canoe lodge and terminates at the private pick-up site across from the historic Morrow Mills downstream, where a bus waits to transport students back to Fort Ancient.



Drifting quietly downstream, the canoeists may observe an abundance of vegetational and animal life, including birds, reptiles, and amphibians. A stop at the Morgan farm and wildlife area provides an opportunity to hike through 86 acres of woodland containing beech, maple, butternut, walnut, and hickory trees on the hillsides, with numerous cottonwoods and sycamores along the river. Trees such as a Kentucky coffee tree, a huge chinquapin oak, and large-tooth aspen can be found also. Many wildflowers appear before the trees come into full leaf. Two lakes on the property furnish aquatic study sites which contrast with the free-flowing river. A large buzzard roost at the top of the ridge provides a resting place for as many as 500 of these large birds in season. The valley profile and the eroding stream, exposing the fossil-rich Ordovician limestones and shales, tell the geologic and glacial story which has so largely determined the biotic communities as well as man's use of the land.

The outdoor education trips are conducted on two weeks' advance reservation only, Monday through Friday. In addition to the canoe livery, an old log cabin, recently restored, is available for group rental.

Bob Morgan
Box 159, Route 2, Morrow 45152
(513) 899-2166

FORT ANCIENT STATE MEMORIAL

696 acres

On SR 350, 7 miles southeast of Lebanon

Fort Ancient State Memorial was created as an archeological preserve in 1891. Care and control of the site have been vested in the Ohio Historical Society since that date.

Two prehistoric Indian cultures inhabited the Fort Ancient earthworks and the Anderson Village site. The Hopewell Indians, living in Ohio between 300 BC and 600 AD, built the earthworks. Sometime between 1200 AD and pioneer history, the Fort Ancient Indians reoccupied the site. On the bluff rising 275 feet above the east bank of the Little Miami River, the Hopewell people constructed walls to make an enclosure in three parts, within which the dead were buried and ceremonies performed. A museum, opened in 1967, shows tools, pottery, ornaments, and methods of burial. There is no charge for school groups.

The larger wooded area surrounding the fort is rich in habitat for plants, birds and small mammals. Small streams have eroded through the covering of Illinoian glacial till. Fossils of Ordovician age may be found in the limestones and shales exposed by the erosion of the river. The gorge here was formed by glacial stream diversion.

The Ohio Historical Society
Columbus 43211
(614) 466-4663

HOB CAMP NATURE CENTER

110 acres

On SR 123, one-half mile east of I-71

Fields in natural succession, woodland, pond, and stream furnish diverse habitats for this school land laboratory. A 20-acre wooded area contains remnant beech and maple trees with a limited number of oaks. Old red cedars, typical of calcareous soils, dot the matured pastures. Wildlife food plantings and reforestation are projects executed by the Warren County Conservation Association, owner of the property.

A stream intersects the area in two places, exposing Ordovician limestones and shales where fossils can be collected.

Manager, Hob Camp Nature Center
718 Southline Drive, Lebanon 45036
(513) 932-5614

WHIP-POOR-WILL HILLS

492 acres

On Middleboro Rd., between SR 350 and US 22

Rightfully named Lou Henry Hoover Wildlife Sanctuary, this large acreage with winterized facilities lends itself well to school resident camping, field trips, day camping, or extensive research.

The Girl Scouts cherish this area like the Indians before them. Preservation has figured preeminently in their development of this site with its deep valleys and wooded hillsides typical of the Little Miami watershed, highly fossiliferous exposures of Ordovician limestone, and open areas previously cleared for farming.

The camp lies beyond the line of Wisconsinan glaciation in the Illinoian till region. But the Little Miami River was a

glacial meltwater stream carrying great quantities of water from the wasting glacier, and it cut deeply into the rock strata. Of geologic interest, too, is the fact that some internal force within the earth arched the rock formations in the Cincinnati area making most of Ohio's rock strata tilt slightly to the southeast. Thus the oldest rocks in the state, the Ordovician, which would normally lie far below the youngest Permian rocks of eastern Ohio, are exposed at the surface. This is most fortunate for fossil collectors!

Geologic and Indian history are no more interesting and important than the mixed hardwood forest and its wealth of wildflowers and woody plants. An abundance of birds and evidence of other animal life may be studied along the many hiking trails.

Camping Director
Buckeye Trails Girl Scout Council
184 Salem Avenue, Dayton 45406
(513) 224-7601

WASHINGTON COUNTY

CAMP FALL RUN
205 acres

Off US 50A on Twp. Rd. 69, southwest of Layman

This farm, used for Girl Scout camping activities, has a ravine formed by a tributary of Fall Run which creates an unusually interesting nature study area. Open fields constitute a large part of the property, but the stream and woodland provide many kinds of habitats for plants and animals.

A large overhang of resistant sandstone rock is responsible for the fascinating weathering pattern and the plants and animals typical of a cool, moist environment. Large hemlock trees and other glacial relict vegetation are in close proximity. The Falls Run Trail, developed by Boy Scouts and interested citizens, may be picked up at the intersection of Fall Run and the creek which goes into the Girl Scout Camp. (See Falls Run Trail Nature Preserve.)

Camping Director
Heart of Ohio Girl Scout Council
1215 Newark Road, Zanesville 43701
(614) 454-8563

CAMP HERVIDA
86 acres

Off SR 339, south of Waterford

This 4-H camp is situated in a steep and forked ravine with sandstone rock exposed along a small stream. Much of the acreage is mixed hardwood forest, oak predominating, but an outstanding feature is an extensive well-grown pine plantation. Many birds and small mammals may be seen, as well as typical wildflowers. Not so typical are walking fern in rock crevices and primitive vegetation.

A lodge with fireplaces, a dining hall, and sleeping cabins are available for spring and fall months.

County 4-H Agent
Washington County Cooperative Extension Service
Court House, Marietta 45750
(614) 373-6623

FORT FRYE FFA ENVIRONMENTAL CENTER
40 acres

Off SR 60, 6 miles east of Beverly

On land loaned to the FFA and ecology groups of Fort Frye High School on the condition that they pay the taxes, these clubs have developed an enviable ecological learning center.

The physical environment is characterized by high, rounded hilltops, capped with Permian age sandstones and shales, the stream cutting through resistant sandstones of the Pennsylvanian series forming cliffs and waterfalls. An old house on the hillside, now used for shelter when necessary, and cleared land surrounding it, indicate man's influence prior to use by the school groups.

The woodland adjacent, including the flood plain along the creek, contains many varieties of trees, some of which are labelled, and typical flood plain vegetation. A wide portion has been used by the classes for raising corn. Broad paths with 38 learning stations have been established and include a forestry management section. The ecology area adjoins a nursery property at the top of the hill.

A field trip conducted by the students could be an excellent learning experience either for elementary classes or high school groups interested in developing their own land laboratory.

Mrs. Ethel Noland
Earth Science Teacher
Fort Frye High School
Beverly 45715
(614) 984-2376

MARIETTA STATE NURSERY
95 acres

On SR 7 and Alt. US 50, 4 miles southeast of Marietta

Situated on low, flat flood plains or terraces along the Ohio River is one of the state's nurseries where certain

hardwoods and conifers are planted from seeds and distributed as seedlings to various parts of Ohio for reforestation and reclamation. Seeds are collected by nursery and state forest crews. They are extracted and cleaned at the nursery and seeded or stored for later use. Conifers include Japanese larch, Norway spruce, red, short-leaf, Virginia, and white pine. The seeds are planted in four-foot-wide beds, irrigated and tended until seedlings are large enough for transplanting, in one to two years, depending on variety.

A visit to the nursery can be highly informative.

Superintendent
Marietta State Nursery
Route 1, Marietta 45750
(614) 373-6574

MUSKINGUM RIVER PARKWAY STATE PARK
60 acres

Along the Muskingum River

Dams and locks have made park sites advantageous along the river. Typical river vegetation, flood plain, and valley profiles may be observed as well as navigation procedures.

In this county, sites exist at Devola, Lowell, and Beverly on SR 60. Locks are operated only during the normal boating season.

Park Manager
Muskingum River Parkway State Park
Box 2806, Zanesville 43701
(614) 452-3820

SAIDA
375 acres

10 miles north of Marietta on Fearing Twp. Rd. 332

This hilly farmland, consisting of woodland, permanent pasture, and tillable fields, has interesting possibilities for a field trip. Shallow oil and gas wells, a stream eroding Permian age sandstones and shales, numerous springs, two ponds, a variety of wildflowers, abundant wildlife, and a broad panoramic view of the countryside may be observed. Woodland is mixed hardwoods with oak and tuliptree predominating. Small groups may arrange to tour the property.

Albert Berg
Hadley Lane, Marietta 45750
(614) 373-4925

VETO LAKE STATE WILDLIFE AREA
448 acres

On SR 339, 8 miles northwest of Belpre

A 160-acre lake with a narrow shoreline provides a variety of habitats for plants and animals. The lake supports a limited number of mallard, wood duck and teal, with heron in the swampy areas. The marginal land contains an interspersion of mixed hardwoods, oak, hickory and beech. An occasional shagbark hickory is also observed.

This environment gives protection to many different kinds of birds and wildflowers. The upper portions of the lake produce excellent populations of bullfrogs and soft and hard-shelled turtles.

Division of Wildlife District 4 Office
360 East State Street, Athens 45701
(614) 593-6933

WAYNE COUNTY

DAVEY TREE NURSERY
220 acres

On SR 539, northwest of Wooster

The Davey Tree Farm is the only one of its kind in the nation. There are 169 species and varieties of deciduous shade and flowering trees, representing 33 genera. All are labeled with Latin and common names making identifying characteristics easy to learn.

Each season provides different stages of the growth cycle for study; bare trees for bark and winter bud, spring for flowers and seeds, summer for leaf form, and fall for color changes and beauty.

A barn may be used for shelter in case of rain.

Manager
Davey Tree Nursery
Route 6, Wooster 44691
(216) 264-3533

O.D. DILLER SCHOOL ARBORETUM

1 acre

At Edgewood Junior High on Grawstark Path, in Wooster

This arboretum, one of the first official school arboreta in Ohio, was initiated in the spring of 1964 by Dr. Diller, then curator of Secrest Arboretum at the Ohio Research and Development Center. With the assistance of the principal and students at Edgewood Junior High School in Wooster, Dr. Diller began a project which in subsequent years has been enlarged to contain over 100 different varieties of trees.

Many schools and agencies have visited Edgewood and used the arboretum as a model. The pride and pleasure derived by students in participating in a living, growing, environmental project frequently may be assessed as monumental. Through this experience they learn that trees replenish oxygen to the air, temper the climate, muffle noise, give shelter to wildlife and aesthetic satisfaction to people.

Principal
Edgewood Junior High School
Grawstark Path, Wooster 44691
(216) 345-6475

DUSH'S CHRISTMAS TREE FARM

50 acres

West of SR 226 on Twp. Rd. 82, Clinton Township

On formerly abandoned, unproductive farmland the owner of this plantation has developed a successful conservation and business venture. Twenty-eight acres of Norway spruce, Colorado blue spruce, Scotch pine, and other cultivars designed for Christmas cutting have been carefully managed from seedling to harvest. Some are in their third harvest rotation. Twenty-two acres are managed for top timber harvest, which in 22 years have yielded two large and two small harvests, totaling 200,000 board feet.

The property lends itself well to field studies of various kinds of timber cutting and growth stimuli as well as a study of dendrology.

Robert Dush
2306 Grandview Avenue, Wooster 44691
(216) 264-0099

INSPIRATION HILLS

212 acres

On SR 604 east of Congress

Rugged topography with steep, rocky ravines, springs, a lake and a beautiful, heavily wooded forest make this a choice area for field studies and camping. The land is owned by the Church of the Brethren and managed by people appreciative of its natural beauty and willing to share their knowledge and skills.

The co-manager teaches ceramics and displays her artistry near the entrance to the area. A winterized dormitory and lodge, in addition to family camping facilities, a pine forest, a rustic log cabin, and bridge built from native timbers create an atmosphere reminiscent of the frontier.

Ashland and Wayne County schools and colleges have discovered this favored study site and others are invited to inquire.

Manager
Inspiration Hills
Route 1, Burbank 44214
(419) 846-3010

KILLBUCK STATE WILDLIFE AREA

1,894 acres

Along Killbuck Creek in the townships south of Wooster and including Prairie Township in Holmes County

This extensive area, the largest remaining inland marsh in the state, is being developed by the Division of Wildlife as a wildlife management area to maintain the marshland, improve habitat and nesting areas for wood duck and other waterfowl, and to maintain upland wildlife species such as rabbit and quail, and forest game species, primarily fox, squirrel, and furbearers. The cattail marshes mixed with buttonbush, cut-off oxbows in the river, and channels adjacent to timber provide Ohio's best wood duck nesting and rearing habitats. Large numbers of migratory waterfowl, particularly puddle duck species, Canada geese, and whistling swan, make the area a favorite birding and hunting area.

The geological history of the shallow U-shaped Killbuck valley begins with the north-flowing tributary of the early Teays River drainage system which was blocked by the Kansan ice sheet as it stopped north of the Holmes County line. This valley below the ice front was filled with sand and gravel, outwash from the glacier. The stream pattern was turned south by the later Illinoian glacier. The fluctuating

glacial impoundments resulted in clay and peat deposits in the valley, which along with the low gradient of .8-foot drop per mile has been responsible for continual seasonal flooding and permanent wet areas.

Five east-west roads cross the valley from SR 83 to SR 226. These are gravel and frequently seasonally impassable. A manmade access to the marshland is an abandoned B and O Railroad line paralleling Killbuck Creek. Hunters, hikers, farmers, and trappers use the old roadbed to reach portions between the east-west roads.

Soils on the slopes and uplands are silty loam derived from the glacial till of the Wisconsinan glacier. This land is tillable, and dairy farming has been the traditional agricultural activity where the land is not too wet for cultivation.

The area is partly wooded with swamp oak and maple and other water-loving plants. It is a favorable habitat for songbirds as well as waterfowl and shorebirds. The prothonotary warbler is a fairly common nester in the acquisition unit although rare-to-non-existent in most of Ohio. Pileated and red-bellied woodpeckers, cattle egrets and, rarely, the endangered bald eagle are seen.

Much of the area is still privately owned and visitors are advised to contact the resident manager regarding management policies and programs.

Area Manager
Killbuck State Wildlife Area
Box 594, Shreve 44696
(216) 567-2107

MEMORIAL FOREST

124 acres

On Co. Rd. 22, northwest of Wooster

The Memorial Forest is the result of a reforestation program initiated by members of the Isaac Walton League 26 years ago on an abandoned farm. Through the efforts of these members, the land has been planted with red and white pines, the white species showing better growth than the red. Twenty acres are devoted to commercial growing and harvesting. A small spring-fed stream with a constant flow runs through the property. A clubhouse may be used for special occasions.

Harry S. McClarran, Secretary
Isaac Walton Memorial Forest
132 Pearl Street, Wooster 44691
(216) 264-4806

MILLBROOK MILL

1 acre

On SR 226, south of Wooster

Millbrook derives its name from the time in history when eight water-driven mills operated along the stream. Keister's Mill, the only one remaining, was built in 1816. The harnessed water power turns the shafts that operate the wheel, running the saw, grinding corn meal, or squeezing apples. It has been in continuous operation since the day of construction.

The mill machinery is in its original state; tools are wooden, reminiscent of a time when pride in workmanship was very important.

Small well-supervised groups may obtain permission to visit the mill, the stream, and surroundings.

Jim Strock
517 East Liberty Street, Wooster 44691
(216) 262-8408

MYERS-SWINEHART FARM

218 acres

On Co. Rd. 154, off SR 302, 10 miles northwest of Wooster

This trim looking farm, lying on a glaciated, nearly level but dissected Allegheny Plateau, has a number of noteworthy features for study. One is the control of excess water which has been achieved by good conservation practices. The results of diversions, sod waterways, and extensive under-surface tiling may be observed.

Of additional interest may be the calf pens, loafing shed, milk parlor for processing the milk from 50 Holstein cows, a woodland pasture, and the general farm operation.

The soil association is the clay-loam Wayne-Rittman-Wadsworth, characterized as being deep acid soil influenced by the glacial till and the underlying sandstones and shales of Mississippian age.

The manager is active in soil conservation work and will serve as a guide.

Carl Swinehart, Manager
Myers-Swinehart Farm
Route 1, West Salem 44287
(216) 264-6343

THE OHIO AGRICULTURAL RESEARCH AND DEVELOPMENT CENTER

1,953 acres

On US 250, 1 mile south of city limits of Wooster

"Individuals and groups are welcome to visit the Research Center, to enjoy the aesthetic values of its buildings and grounds, and to observe research aimed at the goal of Better Living for All Ohioans." This statement is made in a brochure describing OARDC, available upon request.

Known for 83 years as the Ohio Agriculture Experiment Station, OARDC's present name reflects more accurately the nature and scope of a program designed to benefit Ohio's 114,000 farm families. The families of thousands of workers employed in Ohio's $5 billion agribusiness pursuits potentially benefit also.

Research at the center deals with the interrelationship of production and marketing practices. After stopping at the visitors' center on the campus, classes may visit outdoor and indoor laboratories dealing with no-tillage corn planting, floriculture in greenhouses, perennial flower garden, lawn plots testing a variety of grass mixtures, soybeans in a

growth chamber, a US Weather bureau station, greenhouse vegetables including many tomato varieties, insect studies, grape and dwarf apple orchards, SPF (specific pathogen free) pigs, dairy and beef cattle research, the use of a laser beam to facilitate field drainage, and countless other programs of research. The Secrest Arboretum (see separate description) is a part of this great complex.

Ohio Agricultural Research and Development Center
Wooster 44691
(216) 264-1021

SECREST ARBORETUM

115 acres

On SR 83, 1 mile south of Wooster city limits

With its emphasis on variety, naturalness, and scientific research, this arboretum, part of the nearly 2,000-acre Ohio Agricultural Research and Development Center, is outstanding in the United States. Over 1,800 different species and cultivars (cultivated varieties) of trees and shrubs are artistically placed in accord with the natural environment.

Of special interest to many is Walnut Hollow, which has over 150 species and varieties of rhododendron and azalea plantings covering several acres on one hillside, a mixed hardwood forest on the other. Walkways are provided to enjoy both communities, which include wildflowers, ferns, mosses, and songbirds.

Other highlights are the twisted silver fir trees, an intriguing plant oddity; the young bristlecone pines, the same rare species which is known in Arizona as the oldest living thing; a plantation of dawn redwood *(Metasequoia glyptostroboides)*, the "fossil plant that lives"; a large group of arborvitae, unpruned and lovely; and a flowering crab apple display of 135 different varieties. These and fine collections of yews and junipers make the arboretum an excellent outdoor laboratory of unusual beauty and variety. Adjacent to the arboretum there is also an old-fashioned rose garden containing nearly 800 different roses. In 1972 a holly display garden was started which will eventually contain over 150 different species, varieties, and cultivars of holly.

Of value from a utilitarian standpoint is a recent project for shade tree evaluation. Since 1966, 1,000 trees—maples and linden and their cultivars, and hawthorns—have been planted. The purpose of the project is to determine which trees have strong root systems, resist insects and diseases, and require little maintenance. The predominant soil type for these and all the arboretum plants is the Wooster silt loam, derived from glacial till, moderately acid and readily permeable to its subsoil.

An unusual collection of samples of finished wood of all kinds and from all over the world is displayed in the Arboretum Field Headquarters building.

In 1972 a map folder was published, outlining roads and walking trails and indicating major points of interest. Copies are available upon request.

Curator, Secrest Arboretum
OARDC
Wooster 44691
(216) 264-1021

SHREVE LAKE STATE WILDLIFE AREA

170 acres

1 mile west of Shreve

A 57-acre lake and a beech-maple woodland are highlights of this area. The lake attracts a variety of waterfowl during spring and fall migrations. Wood duck and mallard nest here. The area lies on the glaciated, moderately to steeply rolling Allegheny Plateau.

Part of the soils are well drained; some are acid and poorly drained. A large portion is woodland with oaks and hickory found in the beech-maple association. Wildflowers and animals are typical.

Division of Wildlife District 3 Office
912 Portage Lakes Drive, Akron 44319
(216) 644-2293

SPANGLER PARK

250 acres

3 miles west of Wooster off Plain Twp. Rd. 4

Originally a farm donated to the city of Wooster, this park lends itself well to a number of educational purposes. One hundred acres in park land contain mature woods with many native species of hardwoods of the mixed oak forest association. The area has been glaciated and the glacial till is underlain with Mississippian sandstones and shales. These are exposed in the hillsides of the relatively large ravine which runs the whole length of the property. Springs, too, may be observed as well as glacial and stream-carried rocks along the bed of the creek. Abundant wildflowers in spring and many animal species are present.

A large meadow and farm area provide studies in natural succession. Managed woodlots yield wood products. There are many hiking trails throughout the property.

Park Manager
Department of Parks and Recreation
400 Hillside Drive, Wooster 44691
(216) 345-7400

WAYNE COUNTY SADDLE CLUB

50 acres

On Co. Rd. 186, forking right off SR 302, northwest of Wooster

The scene of many exciting rodeos, this site is valuable for field trips for the study of environmental relationships. It lies on the edge of the broad valley of Killbuck Creek, a stream greatly influenced by the large volume of meltwater carried south as the Wisconsinan glacier wasted back. A small tributary on the property has eroded into the Mississippian age sandstones and shales, making rugged topography and rock formations to study.

The hillside hiking and riding trails give access to the mixed oak forest association with walnut, hickory, maple, and many other species present. The wildflowers and animal life are typical of the area. Evidences of the 1969 flood may be observed. Arrangements can be made to use a large enclosed pavilion.

Don Zimmerman
3113 Dover Road, Wooster 44691
(216) 264-0354

WEYGANDT WOODS

44 acres

On SR 539 just off SR 302, northwest of Wooster

The Weygandt farm contains two woodland plots, each significant in its own way. The 19-acre maple woods across the road from the farmhouse is managed for maple syrup production in "sugar" weather during February and March. The processing building is easily accessible. The other plot, 25 acres, is managed for timber production. It contains giant oaks and many other species of trees in the mixed oak forest type.

The land lies, for the most part, on the rolling to flat glaciated upland, underlain by the sandstone formations of Mississippian age. These are exposed in the ravines on the wooded hillsides which overlook the broad Killbuck Creek valley. The rugged terrain adds interest for a field trip through this section.

O.L. Weygandt
Route 6, Wooster 44691
(216) 264-5078

WILLIAMS COUNTY

BEAVER CREEK STATE WILDLIFE AREA

153 acres

Off SR 15, 6 miles north of Bryan

Beaver Creek and the old Lake Maumee beach ridge bisect this area. The creek has a fish population which includes smallmouth bass, rock bass, sucker, bullhead, blacknose dace, and sculpin. Approximately 40 acres are woodland in the beech-maple forest type with typical wildflowers present.

The area is in the high lime Wisconsinan till soil region, with thick glacial deposits. The Fort Wayne moraine with its rolling topography lies just to the northwest, the heavy lake bed soil region of the Black Swamp just to the southeast.

Deer are seen occasionally; other animals such as fox squirrel, raccoon, rabbit, and quail more frequently.

Division of Wildlife District 2 Office
952 Lima Avenue, Findlay 45840
(419) 422-6757

BIBLE, GEORGE, PARK

60 acres

Off SR 15, 6 miles north of Bryan

This property, recently acquired for open space, wildlife preservation, nature study, and recreation, is under development. Twenty-five acres of woodland in the beech-maple forest type provide good study of trees, shrubs, wildflowers, and small animals of the region.

Twenty acres will include tree planting, wildlife, and nature study areas. Fifteen acres include seven acres of water, picnic and parking facilities, and walking trails.

It is a fine area of the future for study of ecology and for passive recreation.

Williams County Commissioners
Bryan 43506
(419) 636-2509
636-2825

BRYAN HIGH SCHOOL OUTDOOR LABORATORY

4 acres

On extension of West High St., entrance east of Lick Creek

A student of Defiance College, with the assistance of members of the high school biology department, conceived the idea of an outdoor study center. A memorial fund established following her untimely death has been used to achieve her objective.

Extensive plantings of numerous species of trees and shrubs have been made each spring and fall for teaching purposes. The area consists of a natural wooded ravine and uplands with heavy glacial clay soils. Part has been left undeveloped for study of natural succession. Grassed trails lead to the major points of interest.

Paul Webster
Bryan High School
Bryan 43506
(419) 636-4536

DREAMLAND ACRES
(Lake La-Su-An)
550 acres

On Co. Rd. R, 7 miles west of Pioneer

Beginning with an original natural lake in rolling glacial moraine country, the owner has developed an extensive wildlife sanctuary with many natural history features. In addition to the moraine, swamps, glacial erratics, and glacial till soils are evidence of the ice invasion. A large 75-acre lake was constructed as well as three smaller lakes and several ponds.

An extensive woodland area west of the big lake is in the beech-maple forest association with many other species, and supports typical wildflowers. The animal population includes deer, blue heron, a variety of songbirds, cliff swallows, and turkey vultures. The lakes are stocked with good fish species. Swamp and lakes contain many other plants and animals for study.

A 5½-mile gravel road provides a scenic drive around the woods and lakes. Four hiking trails have been developed, giving even better access to study areas.

School groups can be scheduled by appointment any day from mid-April through October.

Edward Brodbeck
Route 1, Montpelier 43543
(419) 459-4798

HICKORY VALLEY CAMP
40 acres

On US 6, 4½ miles east of Edgerton

This campground was developed on the rolling hills of the Fort Wayne moraine, a "halt" zone of the wasting Wisconsinan glacier. There are 30 acres of trees and brush in the beech forest type, with maple, basswood, and hickory in the association. This gives protection to wildlife such as deer, fox, rabbit, and squirrel. A swamp bordering the property attracts duck, heron, and geese during migration periods. There are hiking trails for field trip convenience.

Vernon Coil
Route 2, Box 89, Edgerton 43517
(419) 298-2961

WILLIAMS COUNTY CONSERVATION AREA
74 acres

Off SR 14, 5 miles north of Bryan

Three fishing ponds, a beech-maple woodland with pine plantations, many shrubs, and wildflowers combine to make this wildlife preserve valuable to study. Four white-tailed deer are confined in a two-acre pen, and pheasants raised for November release are restricted in a smaller pen. A cabin may be reserved for use in bad weather.

Robert Custar
Route 3, Montpelier 43543
(419) 485-5887

WOOD COUNTY

BOWLING GREEN SENIOR HIGH SCHOOL LAND LABORATORY
2 acres

East of high school on W. Poe Rd.

A commendable project is underway at this land laboratory to reforest the plot with trees which are described in the original vegetation survey of the Northwest Territory. These are in the mixed oak forest group containing several species of oak, the hickories, and many others. Some trees are present now, and there is a pond for studying aquatic life.

A weather station, birdhouses and feeders, and other wildlife feeders, a directory, and an outdoor classroom are being constructed and devised under the direction of the Bowling Green FFA Chapter.

Ivan Stearns and Members of the Bowling Green FFA
530 West Poe Road
Bowling Green 43402
(419) 353-5111

LAKOTA SCHOOL LAND LABORATORY
one-half acre

Adjacent to elementary and junior high school at Lakota

Two small plots provide beginning experiences for the children in this school. One is a grass area surrounded by multiflora rose, autumn olive, and a conifer windbreak – good habitat for birds. The second is an old wooded area containing elm, linden, oak, hickory, sumac, hawthorn, maple, and redbud. A wildflower area with approximately 10 species is associated with the woodland. The area lies within the Lake Plain province with dominately dark, poorly drained soils made from clay. Remnants of the old beach ridge of Lake Maumee may be traced in places.

A map showing self-guiding trails as well as two sets of slides of various trees, wildflowers, and shrubs are available for previews. Students, too, will assist upon request, pointing out less obvious features.

Principal
Lakota High School
Route 1, Fostoria 44830
(419) 457-2441

MARY JANE THURSTON STATE PARK

105 acres

On SR 65 at Grand Rapids

Situated along the Maumee River with access to the pool above Grand Rapids dam, this area has limited study possibilities. A small woodlot near the river may be observed but there is little natural vegetation.

The glacial features are interesting to note, however. The park lies in the "Black Swamp" region which was the bottom of one of those great late-glacial lakes. This accounts for both the flatness of the land and the presence of the impermeable lake clay or clay-rich till composing the surface. Beneath the clay was the gently sloping surface of the early Paleozoic dolomite and limestone. The entrenched Maumee River fed by meltwater from the wasting glacier now drains a great segment of northwest Ohio and Indiana. Its terraces, flood plain, natural level, cutbanks, and meandering pattern are observable.

Park Manager
Mary Jane Thurston State Park
Box 14
Grand Rapids 43522
(419) 832-5538

OTSEGO PARK

50 acres

On SR 65, 5 miles east of Grand Rapids along the Maumee River

Although some large trees and woody plants are available for study in the park, on river banks and flood plain, the major interest is glacial grooves and potholes which may be observed during times of low water, carved in the rock at river level. The grooves, several inches deep, are the result of glacial scouring as the Wisconsinan ice sheet moved southward; the potholes were caused by turbulent stream action as the waters, carrying gravel, were caught in eddies creating a circular, scouring motion.

Present at stream level also is the Sylvania (Oriskany) sandstone, a lowermost middle Devonian formation, the only sandstone in the series. This rock is reported to be the source of the first silica used in the Toledo area for the glass industry. The discovery of natural gas, together with the sandstone, gave impetus to the developing industry.

The park facilities are available April through October on a charge basis.

Wood County Park Commission
301 Sand Ridge Road
Bowling Green 43402
(419) 353-1475

PERRYSBURG PARKS

50 acres

The city of Perrysburg has developed two recreation parks which have good program possibilities for outdoor education. For further information on either site contact:

C.L. Collins
201 West Indiana Avenue, Perrysburg 43551
(419) 874-7913

ORLEANS PARK

31 acres

in town along the Maumee River

This site has nature trails along the river where woodland, water, and rocks combine to form an area rich in educational possibilities. On the high-lying banks of the Maumee, an historical landmark brings to mind the siege of Fort Meigs and the importance of the Perrysburg area in the wars of the frontier. A monument like a needle of granite commemorates the heroic efforts of the men who halted the invasion of northern Ohio.

THREE MEADOWS PARK

19 acres

Access from Three Meadows Ln. off Sandusky St.

Two borrow pits, 20 feet in depth, form the nucleus for this little park. They lie in a heavily wooded area with a wide variety of trees and herbaceous understory plants for study. Hiking trails are minimal but Little Grassy Creek is an intriguing part of the park. A study of the natural aspects and the ecological relationship of borrow pits to the environment could be a challenge and a revelation.

PUGH QUARRY

40 acres

On Portage Rd., west of Portage

This is one of the best mineral collecting areas open to students, and discretion must be used to keep it so. The Dundee dolomite of middle Devonian age, and the lower Devonian Anderson and Lucas dolomites are the major formations in the rock walls. Calcite, fluorite, dolomite crystals, barite, marcasite, celestite, quartz, and sphalerite may be found. A thin fossiliferous bed is contained in the upper part of the Dundee. Styolites which outline petroleum residues commonly occur in the Dundee also.

In order to comply with the State Bureau of Mines requirements, teachers are urged to:

1. Obtain permission from the quarry office.
2. Visit on Saturdays or other non-operative times.
3. Provide an adult guide for each 10 students.
4. Instruct students in safety procedures and conduct prior to the trip.

Manager
Pugh Quarry
Custar 43511
(419) 669-2925

ROCK CIRCUS
200 acres

1 mile north of Lemoyne, southwest of Exit 5 of the Ohio Turnpike

The owner of this area emphasizes one feature on the farm, a museum collection of rocks and minerals. Lectures and demonstrations are given by appointment to school groups or others with a geology interest. A campground is provided for groups wishing to extend their field trip to quarries or other points of interest.

Mary Lou Ruch-Hirzil
Lemoyne 43441
(419) 837-5309

WYANDOT COUNTY

INDIAN MILL STATE MEMORIAL
2 acres

Off SR 23, 3½ miles northeast of Upper Sandusky

"The nation's first museum of milling in an original mill structure authentically portrays the era when the state's basic economy was stabilized on the very grains that were milled" (Echoes). The Williamsburg-red structure built in 1861 stands on the banks of the Sandusky River near the location of an earlier mill erected by the US government for use by the Wyandot Indians. The exhibits embrace the origin and operation of Ohio water-powered grist mills, millstones, and buhrs, tools and techniques of the miller. The museum is open Wednesday through Sunday, school groups accompanied by adults free of charge.

There is little natural history to be observed except the erosional and depositional features of the river and the limited vegetation.

Picnic facilities across the mill pond are maintained by the Wyandot County Historical Society. There are several types of buhrstones on monument pedestals at this site.

The Ohio Historical Society
Columbus 43211
(614) 466-4663

KILLDEER PLAINS STATE WILDLIFE AREA
8,100 acres

West of US 23 and 2 miles south of Harpster

On a flat, smooth, glaciated till plain with clayey, poorly drained soils, a rich wildlife area is maintained. Twelve hundred acres are in marshes and ponds designed to accommodate the great numbers of waterfowl which nest or feed and rest here during spring and fall migration.

A 285-acre upground reservoir, recently completed, provides water control and additional waterfowl attraction. Large numbers of Canada geese, mallard, blue-winged teal, wood duck, and smaller numbers of other waterfowl nest here. It is not unusual to see whistling swans during migration.

Remnant prairie plants such as big bluestem grass, prairie dock, blazing star, and prairie sunflower are present. Fish,

wildlife, and soil and water conservation practices may be observed. A waterfowl observation mound is helpful.

Public open house, including wagon tour of the area, is scheduled for late September each year.

Area Manager
Killdeer Plains State Wildlife Area
Route 1, Harpster 43323
(614) 469-2254

WYANDOT STATE WILDLIFE AREA
341 acres

On SR 199, 1 mile south of Carey

This wildlife refuge contains 160 acres of woodland in the swamp forest type, including elm, ash, silver and red maple, cottonwood, and sycamore. Multiflora rose and cover lanes of hawthorn provide excellent food and cover for a wide variety of birds. In the southwest corner is a cattail and brush covered marsh known since pioneer days as "the Bear Wallow."

Division of Wildlife District 2 Office
952 Lima Avenue, Findlay 45840
(419) 422-6757

selected state, nature conservancy, university, and private nature preserves

NATURE PRESERVES

A nature preserve is defined in this volume as a tract of land or water which is little changed from its condition prior to the coming of western civilization; it is a site with essentially virgin vegetation.* Because this is true, it has scientific importance as well as educational and aesthetic value, usually in more than one discipline. To preserve an area in its natural state it has been necessary in the past and will continue to be necessary to restrict its use.

Although Ohio has had dense forests extending to the state's boundaries from east to west and north to south, there are relatively few stands of timber left to indicate this size and volume. Preservation of the few remaining plots is essential to an understanding of our heritage. Ohio had rich, though somewhat scattered, prairie lands, true representatives of an early xeric environment. Remnants of this vegetation type need careful protection. The process of glaciation left many peat bogs, kettle holes, swamps, falls, and rapids in narrow rock gorges where northern plant species have persisted. Some of these must be saved because of the sheer beauty and wonderment they evoke, and because their presence in the state makes it possible for students to examine and understand the types of vegetation and why they persist in this environment.

The Ohio Chapter of the Nature Conservancy was organized in 1958 with preservation of such areas as its purpose. By working with local citizens' groups to buy and protect suitable places, and by persuading those already concerned with preservation to donate their properties, a number of sites were successfully protected. The Ohio Historical Society and the Ohio Department of Natural Resources have assumed responsibility for some of these and other valued natural areas in the past. The department is now pursuing a much more ambitious nature preserve program.

The program for establishing nature preserves on a statewide basis was enabled by legislative action in 1970, authorizing the Department of Natural Resources to acquire, dedicate, and accept dedication of public and privately owned land. It gives the department authority to manage and protect such lands for educational and scientific use and for pure enjoyment.

The Natural Areas Council, a citizens' advisory body organized to help administer the program, has established a classification system for state nature preserves to indicate their relative fragility and permissible extent of use. Areas are classified as scientific, interpretive, or scenic preserves, with scientific areas being the most restricted in use and scenic areas the least restricted. Mass recreational activities, camping or organized sports are not permitted in any of the preserves, which have been set aside for research, nature study, bird watching, hiking, art, photography, and other nonconsumptive uses. A copy of the complete rules and regulations governing public use of state nature preserves can be obtained from the Ohio Department of Natural Resources, Division of Natural Areas and Preserves.

In describing some of these state areas as well as a number of privately owned and controlled nature preserves in this volume, we do so because we want Ohioans to appreciate the fact that those sites are a part of their heritage. We want advanced students of ecology, botany, forestry, geology, and zoology to have an opportunity to study them if such students can demonstrate that their use will not jeopardize the natural condition of the property.

We invite Ohioans to read about these precious plots of land. Specific location of the property and directions have not been given with the following descriptions. This information will be provided by the owner or custodian when contacted by qualified persons. If the owner or custodian does not grant permission, the applicant will know that too many requests have been made and even restricted use cannot be permitted. In a few cases, the preserves described in this chapter are a little less fragile and paths are established which permit use by small, well-supervised groups of older students. This situation is indicated in the descriptive material.

If permission is granted the following guidelines must be observed:

1. There will be no removal of vegetation or rock specimens for any reason.
2. Extreme care in not trampling one plant in order to reach another will be exercised. This means staying on paths. Experience has shown that photographers are great offenders. If photographs are necessary for study purposes, consideration for other plants is imperative.
3. Users will respect the confidence of location lest others not as careful will trespass and destroy.

*Herrick, J. Arthur, *A Natural Areas System for K.S.U. and Northeastern Ohio,* Jan. 1970. This statement and the spirit of the body of statements above are credited to Dr. Herrick and the Ohio Chapter of the Nature Conservancy.

ADAMS COUNTY

ADAMS LAKE PRAIRIE STATE NATURE PRESERVE

(Interpretive) 23 acres

This preserve was established to save perhaps the best stand of prairie-dock *(Silphium terebinthinaceum)* in the state. The small xeric prairie is surrounded by dry oak forest composed primarily of white, shingle, post, and blackjack oak. An excellent variety of prairie vegetation including big bluestem, Indian grass, rattlesnake master, blazingstar, and prairie coneflower persists within the preserve.

The area is owned and managed by the Ohio Department of Natural Resources. Trails are presently being developed. Due to the fragility of the site, access is by written permission only.

Ohio Department of Natural Resources
Division of Natural Areas and Preserves
Fountain Square, Columbus 43224
(614) 466-6020

BUZZARDROOST ROCK

152 acres

This is a nature preserve acquired by the Nature Conservancy and deeded to the Cincinnati Museum of Natural History. It was established to save for future generations one of the outstanding topographic features of Ohio, a promontory of dolomite situated in a unique natural setting. It is astride the north-south boundary, between calcareous rocks and soil on the west and the acid rocks and soils of the Appalachian Plateau to the east.

Prairie species of plants related to climatic changes since the last continental glaciation, Appalachian species related to the non-glaciated acid soils, southern species and those typical of southern Ohio woodlands are present.

The geologic history includes possible evidence of the meandering of an ancient high-level preglacial stream and several unconformities in the rock sequence. The numerous unique features necessitate a restriction on the use of the area.

Director
Cincinnati Museum of Natural History
1720 Gilbert Avenue, Cincinnati 45202
(513) 621-3889

SPARROWOOD NATURE AREA

90 acres

This choice retreat represents a part of Adams County which is typical of the unglaciated maturely dissected Allegheny Plateau. The thin residual acid soils are underlain with the early Mississippian group of sandstones and shales, although streams in many places have exposed the older Devonian shales. These outcrops are not spectacular but frequent. They contrast with the Silurian age dolomites and the limestones of Ordovician age which occur as outcrops in the western and central part of the county.

The private preserve lies within the Shawnee State Forest. The typical oak-hickory forest with tuliptrees on well-drained soils is a good example of a cut-over forest 20 years after cutting. The vegetation and insect life are reported to be peculiar to the southern Appalachian region and are not found extensively in Ohio. There is a wide variety of wildflowers and ferns in the association.

Use is restricted to groups or individuals interested in outdoor education and conservation.

D.E. Sparrow
19 East North Broadway, Columbus 43214
(614) 268-5366

Route 1, P.O. Box 297, Blue Creek 45616
(513) 544-3917

THE WILDERNESS
(Charles A. Eulett Preserve)

320 acres

So primitive and undisturbed that one of Ohio's most famous naturalists spontaneously called it "The Wilderness," this remote property was named as a memorial for another naturalist who knows the southern Ohio hills as none other.

The preserve is located on the western edge of the Appalachian Plateau on a ridgetop capped with Silurian age dolomite with its west-facing slope overlooking Ohio Brush Creek. Like its neighboring promontory, Buzzardroost Rock, it has a good representation of mixed hardwood forest but contains unusual plant populations of southwestern, boreal, and prairie relicts which include some of Ohio's rarest plant life.

Because it is rugged and beautiful yet fragile in part, permission for field trips to this preserve is granted only to the most careful and appreciative persons.

Director
Cincinnati Museum of Natural History
1720 Gilbert Avenue, Cincinnati 45202
(513) 621-3889

ASHLAND COUNTY

CLEAR FORK GORGE STATE NATURE PRESERVE

(Interpretive) 51 acres

Extending two miles or more from Pleasant Hill dam to the Mohican River is the geologically and botanically significant Clear Fork Gorge. It tells a somewhat unusual glacial story of stream reversal caused when a westward-flowing stream, cutting through sandstone and shale strata, was blocked by deposits of an early glacier. The resulting body of impounded water finally found a low place or "col" and flowed eastward, forming the present Clear Fork Gorge. The hourglass valley, broad above and broad below the gorge, is witness to this tale.

The vegetation within the gorge reflects the variations in temperature, altitude, and soils. The south and cooler side, covered at the top by a forest of oak and planted pines, becomes progressively northern with hemlock, red maple, and Canadian yew growing abundantly near the bottom. An eight-acre segment on this side is virgin white pine and hemlock forest with many large and imposing specimens. Because of this tract and the geologically significant river valley, the gorge has been named a National Natural Landmark, dedicated in 1967.

The northern slope, exposed to southern sunlight, contains a forest of normal pattern: red and white oak, tulip, beech, and maple with a flood plain cover primarily of sycamore and related plants. The valley profile indicates a youthful stage of erosion, with steep slopes, numerous headward erosion ravines, recent flood plains, and slump blocks.

The preserve is owned and managed by the Ohio Department of Natural Resources. Trails have not yet been developed within the preserve, and until their completion, access is by written permission only.

Ohio Department of Natural Resources
Division of Natural Areas and Preserves
Fountain Square, Columbus 43224
(614) 466-6020

CRALL WOODS

55 acres

This forest is described as "near-virgin," with large specimens of beech, maple, tulip, red and white elm, ash, basswood, walnut, red oak, and hickory contained within it. The land is nearly level, lying on glacial till underlain by Mississippian age sandstones and shales. The understory of herbaceous flora is rich in species. Though improvement of US 224 is a threat, the property is now biologically little disturbed, the best known such area in the region.

William Crall
Route 2, Greenwich 44837
(419) 929-6225

ASHTABULA COUNTY

SAM WHARRAN NATURE PRESERVE

35 acres

This tract is a sanctuary belonging to a nature club whose policy has permitted natural succession for almost 10 years. A level ridgetop, formerly an apple orchard, then steep facing slopes down to the flood plain level provide habitats for many unusual species of plant life. A beech-maple and oak-hickory forest on the south-facing slope has rich spring flora. The north-facing slope contains hemlock, striped maple, black maple, and other northern species. The flood plain on one side is also rich in northern species; on the other, silver maple, ash, and herbaceous flora are abundant. A small swamp and a three-quarter-acre pond add aquatic plants and animals for study.

Howard Meahl
3680 Austinburg Road, Ashtabula 44004
(216) 998-4338

ATHENS COUNTY

DESONIER STATE NATURE PRESERVE

(Interpretive) 301 acres

Dissected by Jordan Run, a tributary of the Hocking River, this beautiful nature preserve has steep topography varying from 680 to 900 feet in elevation. The area is quite diverse in its vegetative cover and has representative habitats which range from old farm fields in various successional stages to mature beech-oak forests in the deep ravines and oak-hickory on the steep hillsides. Because of the diversity of habitats, a large variety of ferns, wildflowers, and songbirds abound on the preserve.

The area is owned and managed by the Ohio Department of Natural Resources. Facilities for visitor use are being planned. At present, access to the area is by written permission only.

Ohio Department of Natural Resources
Division of Natural Areas and Preserves
Fountain Square, Columbus 43224
(614) 466-6020

BELMONT COUNTY

DYSART WOODS

40 acres

Dysart Woods is a virgin forest where huge white oaks tower over mixed forest of beech and maple. Surrounding this plot are 455 acres of secondary growth woodland and field.

The forest is a National Natural Landmark deeded to Ohio University by the Nature Conservancy. Ohio University is obligated to preserve the woods in its natural condition.

Field trips must be arranged through the caretaker or the director, both of whom are listed below. A visitation to this unique forest is a tremendous experience but requires an understanding of its value by each visitor in order to guarantee its protection.

William Bartels, Caretaker
Route 2, Belmont 43718
(614) 686-2800

Dr. Warren A. Wistendahl
Ohio University
Athens 45701
(614) 594-3196

BUTLER COUNTY

HUESTON WOODS STATE NATURE PRESERVE

(Interpretive) 200 acres

This beech-maple climax forest has never been cut, and is the most noteworthy known example extending so far south. It is very near the southwestern limit of the nearly continuous forest existing prior to settlement and logging.

Eighty percent of the canopy is beech and maple, the remainder varying from shagbark hickory-white ash-elm in poorly drained sites to oak-hickory or other mixed hardwoods on slopes. The forest understory and herbaceous cover are essentially in their natural condition.

With its lofty tree trunks of impressive girth, this is a beautiful forest in any season of the year. It was dedicated in 1967 as a National Natural Landmark and as a state nature preserve in October 1973.

The area is owned and managed by the Ohio Department of Natural Resources. A system of hiking trails provides access for the visitor, but off-trail access is by written permission only.

Ohio Department of Natural Resources
Division of Natural Areas and Preserves
Fountain Square, Columbus 43224
(614) 466-6020

SILVOOR BIOLOGICAL SANCTUARY

15 acres

This is a small area with an amazing display of wildflowers blooming in April and May. Between 50 and 70 varieties may be found. Trails are narrow, making it difficult to conduct more than 25 persons at a time. Groups are invited to stop at the Zoology Museum on the Miami University campus. A visit here would include access to sanitary facilities. Conducted tours will be arranged by the owners with the aid of students of biology and biology teaching methods; limited to April and the first half of May.

Professor R.A. Hefner
915 Silvoor Lane, Oxford 45056
(513) 523-4365

CHAMPAIGN COUNTY

CEDAR BOG NATURE PRESERVE

203 acres

Cedar Bog is an excellent example of a marl swamp resulting from a complex combination of glacial deposits containing limestone, surface water movement, and groundwater saturation. It is recognized as an example of virgin boreal swamp with a white cedar forest of unequalled quality so far southwest in the range of species. Among other plants are dwarf birch, here at its far southern extreme and disjunct to its range. Showy ladyslipper orchids, gentians, poison sumac, and many other unusual plants continue to grow here. A slow-moving stream maintaining a consistent year-round temperature tends to stabilize the plant and animal habitats.

The property is owned by the State of Ohio and administered by the Ohio Historical Society as a state memorial. It was dedicated in the National Registry of Natural Landmarks in 1967.

Guides are provided for visitors who wish to see the area, but prior scheduling is required. The scientific use of the area is limited to study and research by specialized groups or individuals. A recently constructed boardwalk facilitates access and provides protection.

The Ohio Historical Center
Columbus 43211
(614) 466-5964

KISER LAKE WETLANDS STATE NATURE PRESERVE

(Interpretive) 50.7 acres

The two separate areas of this preserve are the last vestiges of a 360-acre glacial relict known as Mosquito Lake Bog which originally occupied the upper Mosquito Creek Valley following the retreat of the Wisconsinan glacier. Most of the bog was obliterated by the construction of Kiser Lake in 1939. The areas surviving within the preserve have flora typical of bogs or fens and include such species as marsh bellflower, shrubby cinquefoil, Kalm's lobelia, swamp loosestrife, and fringed gentian. Prairie species present in other portions of the preserve include queen-of-the prairie, stiff goldenrod, and big bluestem.

The preserve is owned and managed by the Ohio Department of Natural Resources. Until trails have been completed for visitor use, access is by written permission only.

Ohio Department of Natural Resources
Division of Natural Areas and Preserves
Fountain Square, Columbus 43224
(614) 466-6020

CRAWFORD COUNTY

BARTHOLOMEW WOODS

20 acres

This small oak, beech, and maple forest lying on flat, glaciated land is used by students and faculty of Heidelberg College for biological research. The woodland is quite undisturbed and provides a good show of spring wildflowers, ferns (including the water-loving sensitive fern), and many species of woody plants in addition to large trees. The area is typically poorly drained, with temporary spring pools. Slight variations in topography provide adequate dryness for the maple, beech, and other upland trees.

The property is used strictly for research. Permission may be granted to serious high school or college students who realize the value of maintaining it in its original state.

Department of Biology
Heidelberg College, Tiffin 44883
(419) 448-2381

TSCHANEN WOODLAND TRACT

26 acres

Advanced, well supervised classes may visit this private hideout. The woodland is beech-maple climax forest which has never been pastured. Wildflowers are abundant and range from hepatica to scarlet lobelia. Mammals, equally protected here, range from deer to flying squirrel.

It is typical early Ohio woodland abounding in mosses, ferns, lichens, fungi, and understory shrubs. Of interest historically is a Mohawk Indian shrine landscaped with deciduous shrubs and evergreens. The retreat is a part of the approximately 1,000 acres of woodland along the Sandusky River. This area also has a pond and a conifer arboretum unique in this location.

Mr. and Mrs. Charles Tschanen
439 East Lucas Street, Bucyrus 44820
(419) 562-5773

CUYAHOGA COUNTY

TINKERS CREEK GORGE

400 acres

Dedicated in 1967 in the National Registry of Natural Landmarks, this natural area lies within the Bedford Reservation of the Cleveland Metropolitan Park system, adjacent to a metropolitan area.

Two types of virgin forest are found on the scenic steep slopes of the gorge, which was formed by rapid downcutting of a glacially modified stream. The two forest-types, one oak-hickory, the other beech-maple-hemlock, are excellent relicts of the original forest cover. The deep ravine affords a cool, shaded zone near the bottom where ...ne beech, maple, and hemlock find optimum environmental conditions. Increasing light and warmer temperatures near the top favor the oak-hickory type. The zone between shows transition cover.

It is interesting to note that Tinkers Creek Gorge, like so many scenic features in Ohio, owes its extremes in topography and the associated vegetation to glacial effects.

Cleveland Metropolitan Park District
2000 Standard Building, Cleveland 43113
(216) 621-1054

DEFIANCE COUNTY

KRILL'S LAKE

30 acres

A depression in the Fort Wayne glacial end moraine accounts for this three- to four-acre lake. Boggy edges have cattail and other emergent vegetation. Rich odonata fauna (damselflies and dragonflies) and snails make collecting possible. About 20 acres of deciduous trees of the beech-maple forest association are adjacent to the lake. Visits are restricted to serious students and must be confined to dry weather.

Cleon D. Krill
Route 1, Twinlake Farm, Edgerton 43517
(419) 298-2903

DELAWARE COUNTY

HIGHBANKS METROPOLITAN PARK STATE NATURE PRESERVE

206 acres

A long strip of land extending from the southern park boundary to the northern edge of the shale cliff immediately along the Olentangy River was dedicated as a nature preserve in 1973 under the Ohio Natural Areas system. The nature preserve lies within the 1,050-acre Highbanks Metropolitan Park.

The outstanding features justifying the preservation of this tract of land consist of a large stand of oak-hickory forest on land sloping to the 110-foot-high bluffs of Ohio shale overlooking the Olentangy River, undoubtedly the most spectacular remaining view of the valley. The cliff of Ohio shale and its contact with a narrow section of the Olentangy shale near the flood plain level, the cutbanks typical of a glacial meltwater stream, and the wide valley tell the geologic story of valley formation.

Noteworthy, also, is the 12-acre horseshoe-shaped prehistoric Indian earthworks first described in 1836 by an early Ohio surveyor. Archeologists attribute the earthworks to "late woodland" Ohio Indians known as the Cole culture who lived in this area about 1,000 years ago and probably were Hopewell in origin.

The scenic value of the Highbanks cliff area portends its acceptance as a Natural National Landmark by the National Park Service and designation of the prehistoric Indian earthworks as a National Historic Landmark.

A 2½-mile hiking trail has been developed in the area but is presently restricted to use by guided tours only. Off-trail access is by written permission only. For permits or further information on guided tours, contact the Columbus and Franklin County Metropolitan Park District, which owns and manages the preserve.

Columbus Metropolitan Park District
999 Park Road, Westerville 43081
(614) 891-0700

ERIE COUNTY

GALPIN WILDLIFE PRESERVE

37 acres

Willed to Milan "to be preserved in the wild state as long as time shall endure," this property is recognized widely as a choice natural area. Wooded ravines with many specimens of virgin trees in a hardwood forest and a rich understory of shrubs and wildflowers are part of its attraction. A tributary of the Huron River gives bottomland habitat where birds and small animals are abundant.

Facilities are available at Edison Park across the street.

The Milan Cemetery Association
Milan 44846
(419) 499-4683

FAIRFIELD COUNTY

SHALLENBERGER STATE NATURE PRESERVE (Allen Knob)

(Scenic) 87 acres

Willed to the county commissioners from the Shallenberger estate and subsequently dedicated as a nature preserve under state supervision, this virtually untouched knob and an adjoining one make a valuable study area. A resistant section of the Black Hand sandstone forms a precipitous wall around much of the hill and accounts for its presence on the landscape.

Large oaks and typical associated species of trees, shrubs, and wildflowers cover the hillsides. The top is capped with a fringe of chestnut oak on the outer edges, with tulip, other species of oak, cherry, maple, and birch distributed throughout the central portion. A thought-challenging depression is found on the top which is reported to have been a small quarry where stones were removed for a nearby cemetery. The intervening years have obscured evidence of this.

The preserve is owned and managed by the Ohio Department of Natural Resources. Trails are presently being developed, but until they are completed, visitor access is by written permission only. An interpretive booklet is available.

Ohio Department of Natural Resources
Division of Natural Areas and Preserves
Fountain Square, Columbus 43224
(614) 466-6020

WAHKEENA

150 acres

The Wahkeena State Memorial was bequeathed to the Ohio Historical Society as an outdoor observation laboratory. Here botanists, zoologists, geologists, and ecologists are studying the complex relationships between the living and nonliving components of our natural environment.

The area has many features which make observations significant. An impoundment provides habitat for many kinds of aquatic plants and animals. Migrating waterfowl and shorebirds are frequently found at the pond.

The major part of the property is unspoiled woodland, in that it has not been timbered for many years. Vegetation consists of large oaks and hickories with numerous other hardwoods in association. Ground plants include unusual ferns, orchids and other wildflowers typical of rich, moist, cool forests in residual sandstone soil. Found also are northern plant species such as hemlock and black spruce, plants which have persisted since the last stage of glaciation, the agent responsible for their presence.

The boundaries of both the Illinoian and Wisconsinan ice sheets are in close proximity to the property. This makes possible the investigation of the northern plant species which seeded in front of the glaciers. Exposures of the Black Hand sandstone formation add to the beauty and geologic value of the site.

Serious students may obtain permission to tour the property in all seasons, but guided tours must be arranged during the summer months.

The Ohio Historical Center
Columbus 43211
(614) 466-4722

FRANKLIN COUNTY

BLACKLICK WOODS METROPOLITAN PARK STATE NATURE PRESERVE

(Scenic) 55 acres

Extending from Franklin County into the northwest corner of Fairfield County, this small portion of 632-acre Blacklick Woods Metropolitan Park was dedicated as a state nature preserve in 1973. The area is largely swamp forest with pin and bur oak, red elm, abundant spicebush, marsh marigold, and marsh buttercup. Slightly higher elevations are covered with beech-maple climax forest and a rich understory of herbaceous and woody plants.

The area is owned and managed by the Columbus and Franklin County Metropolitan Park District. A system of hiking trails provides access for visitor use within the park and preserve. The Swamp Forest Trail affords the best view of the preserve.

Columbus Metropolitan Park District
999 Park Avenue, Westerville 43081
(614) 891-0700

GAHANNA WOODS STATE NATURE PRESERVE

(Scenic) 50 acres

Destined to be shorn of its mature beech, maple, cherry, and ash trees, its low-lying swamps to be drained and demolished, this property was instead sold by its would-be developer to the Ohio Department of Natural Resources to be preserved and protected. Within hiking distance of the Gahanna schools, it is an ideal ecological study area, rich in flora and fauna and lending itself well to either a field trip or extensive study.

The property is practically devoid of contour lines although there is enough elevation to have a mixed hardwood association on the edges. A series of six swamps, one of them perhaps a glacial kettle hole, runs through the central and southwestern portions of the forest. A pin oak-silver maple swamp forest predominates, with several small open areas occupied by an extensive stand of buttonbush. Spicebush is the predominant understory species but a good variety of wildflowers and ferns may be observed.

Water supply to the swamp forest does not seem to be a problem at present. Unsuccessful attempts have been made to drain the wet areas. The soils are predominantly limy clay loam which tend to develop peat bogs and swamps in depressions.

The area is owned by the Ohio Department of Natural Resources and will be managed by the City of Gahanna Department of Parks and Recreation. Trails have been developed for visitor use. Off-trail access is by written permission only.

Ohio Department of Natural Resources
Division of Natural Areas and Preserves
Fountain Square, Columbus 43224
(614) 466-6020

ROCKY FORK NATURAL AREA

15 acres

An unusually beautiful and exciting area for studying geology and botany, this ravine is strictly limited to use by advanced high school or college students under careful supervision.

The area lies along Rocky Fork Creek, a tributary of Big Walnut Creek. A broad terrace, cutbanks and flood plain may be observed on one side of the creek. A cliff on the other side shows an exposure of Bedford shale, its transitional contact with the Berea sandstone showing the three typical units: the lower with ripple marks and a concretionary sandstone layer; the middle with ripple marks, crossbedding and a "rolled" appearance; the upper, firmly cemented and crossbedded grading into the Sunbury shale, a carbonaceous, thin-bedded formation similar to the Ohio shale. This is a valuable site for seeing the sequence of early Mississippian rocks.

The geology and hardwood forest may be studied any time, but for the lush carpet of spring wildflowers a visit in late April or May is advisable. Permission must be obtained well in advance. Directions will be given at that time.

Joseph A. Jeffrey, Jr.
Crooked Mile Road, Gahanna 43230
(614) 475-3111

FULTON COUNTY

GOLL WOODS STATE NATURE PRESERVE

322 acres

This property is an unusually good example of what was once Ohio's Black Swamp. The term is applied to an extensive flat area approximately 20 to 30 miles in width extending northeast-southwest along the Maumee River which was the bottom of an ancestral Lake Erie. The surface of this glacial lake was over 100 feet higher than the modern lake and was caused by the dam of ice to the north blocking the normal stream flow.

When the ice melted, the heavy deposits of fine silt and clay made adequate natural drainage impossible, resulting in the formation of the swamp. Early farmers ditched the land, which they found to be fertile, but it wasn't until 1859 when a law was passed providing public ditches that the swamp was completely drained.

Goll Woods is a remnant which has very large, nearly virgin, swamp forest trees. Huge bur oak, white oak, and cottonwood may be found with many other trees in association. Wide gravel paths, two miles in length, have been developed. For contrast, classes may compare and watch the progress of the many acres of new pine plantations. In the understory are such choice flowers as harbinger-of-spring, swamp buttercup, fawn lily, and Jack-in-the-pulpit, these intermingled with spicebush and nettle. Restrooms and parking are at the north end of the property.

Goll Cemetery, of value for historic and geologic weathering studies, has a parking lot. It gives access to the Tiffin River and aquatic habitat. Guide or naturalist services can be arranged and descriptive brochures may be requested for study prior to the trip.

Ranger
Goll Woods State Nature Preserve
Route 3, Box 67, Archbold 43502
(419) 445-3276

GEAUGA COUNTY

STEBBIN'S GULCH

600 acres

Providing access to outstanding geological formations, this part of the Holden Natural Areas complex (see p. 180) is registered as a National Natural Landmark. It compares favorably with the Watkins Glen region in New York State. The rock strata are Devonian and Mississippian in age, embracing sections of the Chardon, the Berea sandstone, the Bedford and Cleveland shales. The deep east-west ravine cut through these rocks contains a mixed hardwood forest covering which has largely escaped cutting. Glacial relict vegetation of mature hemlock and white pine is particularly rich on the north-facing slope.

The Holden Arboretum
9400 Sperry Road, Mentor 44060
(216) 946-4400

WHITLAM MEMORIAL FOREST

100 acres

A woodland tract with mature mixed hardwoods of good quality, this site is ideal for forest-related studies. Wildflowers and undergrowth in various stages of succession are plentiful. Birds and small mammals may be observed. Hiking trails and parking are the only facilities in this area, which is to be used for "viewing" or advanced study only.

Geauga County Commissioners
County Court House
Chardon 44024
(216) 285-2222

GREENE COUNTY

JOHN L. RICH STATE NATURE PRESERVE (CLIFTON GORGE)

(Interpretive/Scientific) 255 acres

This finest part of the Little Miami River gorge stretches for two miles just east of the John Bryan State Park.

Upstream from the gorge, the river served as an outlet for the meltwaters from a broad valley above. As it reaches the resistant Silurian age dolomite bedrock, the valley deepens rapidly, its walls steep to overhanging and the valley width little more than the width of the stream. The narrow, twisting channel has apparently been made by the enlarging and connecting of a series of potholes, which may be observed at various levels of the rock walls. These physical features create a unique environment.

Northern vegetation relicts persist, including hemlock, yew, mountain maple, and red elderberry. Prairie plants, southern species, and trees and shrubs typical of calcareous

soils add diversity and contribute to the uniqueness of the area. Nature walks may be conducted upon request.

The area is owned and managed by the Ohio Department of Natural Resources. Hiking trails exist on the north side of the gorge for use by the general public. Off-trail access is by written permission only. Use of the south side of the gorge is restricted to scientific research and study, and access is by written permission only. An interpretive booklet is available without charge.

Ohio Department of Natural Resources
Division of Natural Areas and Preserves
Fountain Square, Columbus 43224
(614) 466-6020

TAWAWA BEECH FOREST
(Formerly Wilberforce Woods)
50 acres

This beautiful woodland, along Massie Creek adjacent to the north edge of Wilberforce and Central State universities, has an unusual combination of dominant trees including virgin beech, somewhat south of the usual beech forest. With rather younger white and red oak, tulip, and cherry, it makes an interesting study area. A rich understory of redbud, dogwood, sassafras, hackberry, blue beech, and maple and beech reproduction gives added diversity to the area. The absence of large maples suggests the possibility of early selective cutting. Saprophytic beechdrops and Indian pipe are found occasionally. Some old trails lead through the woods but it is essentially undeveloped.

Historically the area is of interest because of the former existence of mineral springs which created a health resort area named Tawawa Springs. In 1856 the resort was remodeled as a university and named for the English abolitionist William Wilberforce. In a later reorganization two universities emerged.

The rolling topography of the area is due to its location on the Cuba end moraine of the Wisconsinan stage of glaciation. Massie Creek has cut through the glacial till to form the valley terrain.

On April 3, 1974, Tawawa Beech Forest happened to be in the path of a violent tornado. Many of the virgin or near-virgin trees were laid low by the sweep of the storm. The damage was tremendous, but the forest openings provide an interesting study of succession which should be evident for years to come.

David Rubin
Department of Biology
Central State University
Wilberforce 45384
(513) 376-7727

GUERNSEY COUNTY

MOORE MEMORIAL WOODS
78 acres

Preservation of this wooded hillside and ridgetop is a project of the Guernsey County Soil and Water Conservation Service. The area is all woodland, mostly native, of the oak-hickory forest type with a small pine plantation on the east ridge. Some of the timber is very large and reported to be virgin. The spring wildflowers are abundant. The place is inhabited by deer, grouse, squirrel, rabbit, and many species of birds.

Old Washington, an interesting town historically, is nearby. It was the site of a Civil War skirmish and has Confederate soldiers buried in its cemetery.

George W. Elkenberry, Manager
Route 5, Cambridge
(614) 432-2783

HOLMES COUNTY

VAN SICKLE WOODS
39 acres

Undisturbed for 70 years, this deep, mixed hardwood forest on abandoned farmland has been purchased for preservation by the Ohio Chapter of the Nature Conservancy. Rich in variety of species and herbaceous understory, with an especially excellent display of ferns and spring wildflowers, the woods is a valuable study area typical of the region.

Located near the line of glaciation, the hill property is bordered on two sides by small streams, tributaries of Killbuck Creek. The erosion process and slumping reveal exposures of massive sections of the Massillon sandstone outcropping near the hilltop. A delightful gorge and small waterfall on one stream adjacent but not on the Van Sickle property, enhance the scenic quality of the area.

Van Sickle Woods is watched over by an ardent woodsman and member of the Nature Conservancy who is willing to conduct tours or suggest research projects for serious students.

Dr. Oliver Diller
1368 East Wayne Avenue, Wooster 44691
(216) 264-0944

KNOX COUNTY

KNOX WOODS STATE NATURE PRESERVE

(Scenic) 30 acres

Because the Knox County Commissioners realized before it was too late that this beautiful, nearly virgin woodland would have greater value for the children of the county as a forest than for its timber, this tract behind the old Children's Home has been saved from destructive change. Although it was marked for timbering, the commissioners created instead an outdoor education area for the schools of the Mt. Vernon area.

Here huge oak, maple, hickory, and black walnut form a magnificent summer canopy. The ground flora, including a wide variety of spring wildflowers, has also been preserved.

Trails are presently being developed for visitor use. Access will be somewhat limited until the trail system is completed.

Knox County Commissioners
Court House
Mt. Vernon 43050
(614) 392-0921

LAKE COUNTY

HOLDEN NATURAL AREAS

1,070 acres

Four large and unusually significant natural areas, buffered by a 2,400-acre arboretum, are located amazingly close to metropolitan Cleveland. Three of the properties in the complex were registered as National Natural Landmarks in 1967.

The natural areas are protected by the Holden Arboretum but interpretive tours and research programs may be arranged for serious students and selected groups.

The Holden Arboretum
9400 Sperry Road, Mentor 44060
(216) 946-4400

For a visit to Hanging Rock Farm:

Benjamin P. Bole
9446 Sperry Road, Kirkland 44094
(216) 942-2701

BOLE FOREST

40 acres

This area on the arboretum property contains magnificent specimens of virgin red oak, beech, sugar maple, and tupelo with an additional 30-acre buffer tract of excellent second-growth trees.

HANGING ROCK FARM

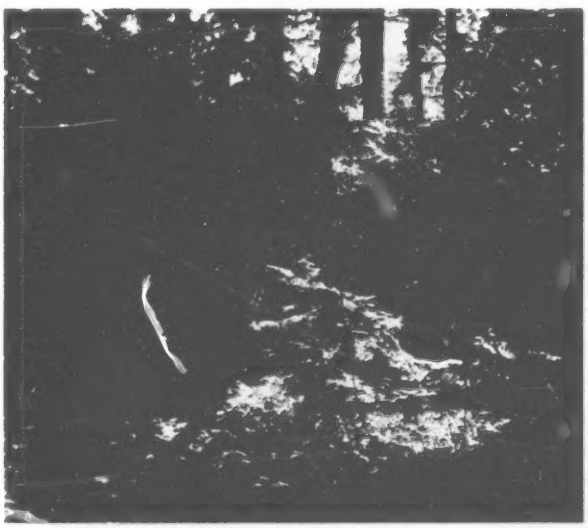
400 acres

Virgin white ash and hickory are among the unusual specimens in this mature hardwood forest. The "hanging rock" refers to a large slump block of Sharon conglomerate which has weathered and fallen from its original formation level.

LITTLE MOUNTAIN

65 acres

This site, at an elevation of 1,200 feet, is being maintained by the arboretum as a natural area. A stand of white



pine and hemlock towers above the mountaintop's tremendous geological formations.

STEBBIN'S GULCH
(See p. 178)

KIMBALL WOODS
100 acres

"Since the days when all of Ohio was wilderness, the Kimball family has enjoyed its own woodland sanctuary, and fearing what might happen to it . . . [the family] deeded 57 acres of their farm to the Nature Conservancy in 1962," writes Dr. Arthur Herrick of Kent State University regarding this tract.

Additional land was added and transferred in its entirety to Kent for continued protection, appreciation, and research.

The terrain of the region is rolling; it lies on thin glacial till, underlain by the shales and thin sandstones of the massive Chagrin formation. Mature beech-maple forest, second-growth elm swamp forest, and old fields provide diverse habitats. Spring flora is especially rich.

Kent State University
Department of Biological Sciences
Kent 44240
(216) 672-2260

MENTOR MARSH STATE NATURE PRESERVE
(Interpretive) 619 acres

A Department of the Interior survey reports that this property, with its five distinct natural habitats, is the richest in number and variety of plant and animal species of any area bordering the Great Lakes. It was designated a Natural Historic Landmark in 1966.

Geologically, the marsh is an old bed of the Grand River and parallels the lake. The swamp and swamp forest bordered by a dune community and beech-maple forest may soon be studied with the help of an interpretive center and long trails. Famous for many kinds of wildlife, the area is known to provide nesting sites for prothonotary warblers and other rare species.

The area is jointly owned and managed by the Ohio Department of Natural Resources and the Cleveland Museum of Natural History. A system of hiking trails has been developed, but off-trail access is by written permission only. It is recommended that arrangements be made with the museum's education department for visits during April, May, June, September, and October.

Cleveland Museum of Natural History
Wade Oval
University Circle
Cleveland 44106
(216) 231-4600

RESOURCES CENTER
28 acres

This area is named Resources Center to honor the donor, Resources Inc., a private Lake County land preservation organization, through whose efforts a total of 135 acres have been added to the Lake County Metropolitan Park District. Resources Center was donated to the park district in 1972, with the deed transferred through the Ohio Chapter of the Nature Conservancy.

The preserve is a beech-maple forest which merges with oak-hickory: It includes a hemlock ravine with glacial relict vegetation and a hogback ridge above the Grand River with an elevation of about 150 feet. This is one of the typical narrow ridges carved out of the Devonian rocks by the Grand River and its tributaries following the last glacial period.

The variety of forest trees and wildflowers makes this fragile area deserving of extreme care and appreciation.

Lake County Metropolitan Park District
1385 West Jackson Street, Painesville 44077
(216) 352-9568

LICKING COUNTY

BLACK HAND GORGE STATE NATURE PRESERVE
(Interpretive) 740 acres

Ohio's program of preserving original natural features under the Natural Areas Act of 1970 has recently added this valuable property through the cooperation of two citizens who shared concern for its protection.

The narrow valley was carved into the Black Hand sandstone partially by stream reversal when the west-flowing river was blocked by an early glacier. When the impounded waters finally broke through an opening, the three-mile-long, east-west gorge was formed. Subsequent downcutting by the Licking River has incised it more deeply.

Formed in the Black Hand sandstone of Mississippian age, a crossbedded, conglomerate sandstone showing variation in resistance to weathering, sheer cliffs and rugged topography characterize the area.

The area abounds in Indian legend, including the story of a pictographic black hand once visible at the east end of the gorge. This was destroyed by blasting for the Ohio-Erie Canal towpath when the narrow section of the river was used as a part of the canal. The gorge contains the excavations for an old glass sand quarry, a tunnel for the abandoned Ohio Electric Railroad, and a safe trestle of the Baltimore and Ohio Railroad which also provides a series of new rock cuts between Toboso and Hanover.

The hilltops are covered with Virginia pine, oak, maple trees, and mountain laurel. The flood plain has abundant growth of equisetum, cottonwood trees, and sycamore. Mixed hardwoods and a luxuriant growth of spring wildflowers are found on the wooded hillsides. Liverwort, mosses, and ferns cover the rocks in many places. A well-defined trail leads one from the roadways on either side and crosses the river on a broad walk beside the railroad trestle.

The area is owned and managed by the Ohio Department of Natural Resources. Access is by written permission only until trails have been completed.

The Toboso Black Hand Gorge Tour Guide Project by students of Toboso Elementary School consists of guides, taped talks, guided tours, display material, and dramatized legends and is an illustration of the use school groups can make of a choice area near at hand. Students themselves will demonstrate their work and interpret the property to visiting classes.

Ohio Department of Natural Resources
Division of Natural Areas and Preserves
Fountain Square, Columbus 43224
(614) 466-6020

For information concerning the Toboso Black Hand Gorge Tour Guide Project:

Principal
Toboso Elementary School
Route 4, Newark 43055
(614) 763-2342

CRANBERRY BOG STATE NATURE PRESERVE

(Interpretive) 20 acres

Cranberry Bog, named to the National Registry of Natural Landmarks in 1968 and dedicated as a state nature preserve in January of 1972, is a unique floating sphagnum island in Buckeye Lake. When the lake was impounded in 1830, a portion of an original and more extensive bog rose with the deepening water and survived as the only one of its kind in existence. Instead of the usual situation where bog vegetation surrounds open water and gradually encroaches until the lake is filled, the situation is reversed. The basic ecological principle of gradual decline is evident. Cranberry Marsh is estimated to have been 420 acres when it first rose. Previous studies dating to as early as 1912 as well as ongoing research are providing valuable information regarding ecological succession, making it an outstanding teaching site for serious students.

The glacial relict vegetation persists on the bog. Cranberries, poison sumac, pitcher plants, and many other species are found.

The area is owned and managed by the Ohio Department of Natural Resources. Due to the extremely fragile condition of the island, no visitors are permitted unless they have received written permission. Access is restricted to small, well-supervised groups who must remain on the established boardwalk trail.

Ohio Department of Natural Resources
Division of Natural Areas and Preserves
Fountain Square, Columbus 43224
(614) 466-6020

DENISON UNIVERSITY BIOLOGICAL RESERVE

350 acres

This is a field laboratory established by Denison University to provide opportunity for teaching and research in ecology. Special emphasis is placed upon the effects of human activity on natural systems. A great variety of native habitats includes typical deciduous forest, brush, mowed and grazed grassland, marsh, pond and wetland. Succession plots, managed timber, coniferous plantations, and a botanical preserve are used for class and individual research. Junior and senior high school classes seriously interested in environmental biology are invited to visit the preserve during the school year.

Denison University
Biology Department
Granville 43023
(614) 587-0810

LORAIN COUNTY

CHANCE CREEK

68 acres

This property, purchased by Oberlin College for a recreation area, has proven to be a benefit to the Biology Department. It is located partly on the flood plain of the Vermilion River with a wooded slope on the east side, and partly on an entrenched meander valley of Chance Creek, a tributary of the Vermilion.

The site is almost completely wooded except for the shale cliffs through which the streams have cut. The Chance Creek ravine contains beech and hemlock among more extensive stands of beech-maple forest. A few unusual plants are present with ferns especially abundant. The use of the site is restricted to college level students or adults.

Oberlin College
Biology Department
Oberlin 44074
(216) 774-1221

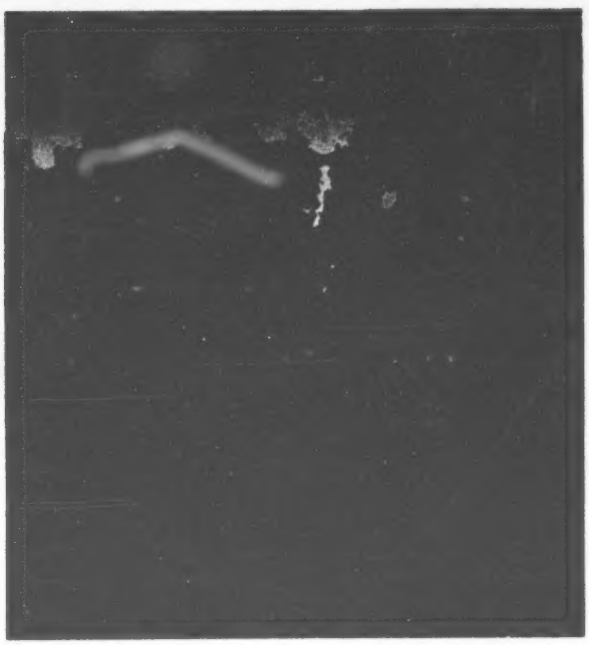
LUCAS COUNTY

IRWIN PRAIRIE STATE NATURE PRESERVE

(Interpretive) 142 acres

This inconspicuous flat field with occasional clumps of trees scattered over it is one of the last vestiges of the natural wet prairie in northwestern Ohio. Situated in the old lake bed of ancient Lake Erie, it is low in relief and underlain by the silt and clay deposited upon earlier glacial till.

During the spring and early summer the prairie is usually covered with water and is marked with luxuriant growth of bluejoint and slough grass, with clumps of willow, cornel, buttonbush, and aspen. August and September bring gentians and other prairie flowers in view. Bitterns, rails, and swamp sparrows have nested in the area in recent years. Painted, Blanding's, and spotted turtles may be seen.



The area is owned and managed by the Ohio Department of Natural Resources. At the present time, no trails have been established for public use. Access to the preserve is by written permission only.

Ohio Department of Natural Resources
Division of Natural Areas and Preserves
Fountain Square, Columbus 43224
(614) 466-6020

SCHWAMBERGER PRESERVE

26 acres

In contrast to the wet Irwin Prairie in the same general region, this preserve is both wet and mesic prairie with a far more extensive assemblage of prairie plants and woody plant development. Burning of parts of the land has been necessary to maintain the prairie mixture, which includes abundant roundleaf sundew, big and little bluestem, Indian grass, prairie dock, arrowleaf violets, and sedges.

At present, Nature Conservancy is cooperating with the Toledo Naturalists Association to protect the property. The latter group plans to donate it later to the state natural areas system, which will assume protection and supervision of the land. A house, barn, garage, and greenhouse are located on the property and will be used by a resident caretaker-naturalist.

Ohio Chapter of the Nature Conservancy
1504 West First Avenue, Columbus 43212
(614) 486-4194

PERRY COUNTY

FORT GLENFORD

85 acres

This surprisingly unspoiled site may be explored or studied by contacting the owner, who lives at the foot of the hill. The land has been in the family for several generations. Fortunately, the uniqueness of the site is appreciated.

Prehistorically, it is believed that the high, flat-topped hill, its slopes heavily wooded, served as a campground and fortress for a prehistoric Indian culture. Evidence of habitation is the collapsed stone wall which surrounded the encampment and the mound of rocks on top.

Even more significant, possibly, are the uncut woodland and the large and small slump blocks of the Massillon sandstone, a rock formation of Pennsylvanian age. The formation has a 20-foot outcrop at the top of the hill and was the source of the stone wall and the rugged aspect of the hillsides. At places chunks of conglomerate, sandstone with quartz pebbles cemented within it, or pieces which glisten with quartz crystals, may be observed.

The large trees are oak, beech, ash, and maple, probably with chestnut relicts. Mosses, ferns such as polypody, ebony spleenwort, and leathery grape are found in many places. Wildflowers typical of deciduous southeastern Ohio woodlands are abundant.

For permission and directions, contact:

Don Cooperrider
Route 1, Glenford 43739
(614) 659-2375

PICKAWAY COUNTY

STAGE'S POND STATE NATURE PRESERVE

(Interpretive) 123 acres

Lying unexpectedly on the Pickaway plains north of Circleville is a glacial land form commonly termed a kettle hole by geologists. This water-filled depression, varying in elevation from 730 to less than 690 feet above sea level, was caused by a large chunk of ice broken off from the wasting Wisconsinan glacier probably 11,000 years ago.

Melting in place, it was surrounded by deposits of glacial till, some of which filtered into the hole when the ice was gone. Kettle holes are commonly associated with end moraines. The Marcy moraine, which is probably about 50 feet thick and rides over the Mississippian age rocks, is three miles east. Together they form the edge of the Appalachian Plateau which rises 300 feet above the plain.

The pond, approximately the diameter of a football field, has 45 acres of water with a rim some 25 feet above. Trees, grass, shrubs and emergent vegetation cover the banks and the water's edge. It is a convenient stopping place for migrating waterfowl and is visited by hundreds of bird watchers each year. Osprey and other unusual species are seen on occasion. Adjoining woodlands and a second smaller pond make an excellent study area.

Historically the pond and hundreds of acres adjacent to it were owned by a Scotch settler named Richard Stage. A Revolutionary War participant, he received a government grant in Adams County but sold it and brought his family to Pickaway County on territory known as Congress land. The property remained in the Stage family until 1970 when the pond area was sold and destined to become part of a housing development. The Garden Club of Ohio, spurred by the enthusiastic work of the Pickaway Garden Club, adopted a project to save the pond. Individually and collectively these clubs raised money to buy the site and then placed it in the care of the Nature Conservancy.

The area is now owned and managed by the Ohio Department of Natural Resources. A parking lot, boardwalk, and observation platform are earmarked for early development. At present, facilities are limited to a small trail that leads from the road to the pond. Access to other areas of the preserve is by written permission only.

Ohio Department of Natural Resources
Division of Natural Areas and Preserves
Fountain Square, Columbus 43224
(614) 466-6020

PORTAGE COUNTY

ARSENAL LAND NATURE PRESERVE

280 acres

In 1968 a tract of land near the Ravenna Arsenal was declared government surplus. Kent State University negotiated to procure a section of the land south and east of the West Branch of the Mahoning River as a sanctuary and study area.

The sanctuary area contains a section of the river, swamp areas, and upland terrain providing a wide variety of habitats with rich flora and fauna. The numerous oxbows in the river and glacial deposits help to tell the geologic story. Pin oak swamp forests cover the flood plains, with a mixed hardwood association covering the uplands and providing rich spring wildflower displays. Man's contribution of an old railroad adds diversity to the ecologic picture.

The area is reserved for teaching and research in the fields of forestry, wildlife management, ecology, limnology, entomology, ornithology, conservation, and soil studies. For those who can respect and protect the property, field studies may be arranged.

Charles V. Riley
Kent State University
Kent 44240
(216) 672-2266

BEVERLY WOODS

42 acres

Willed to the National Audubon Society for a nature sanctuary, this plot was then leased to Kent State University for study and protection. The area is glaciated, gently rolling, lying on thick glacial deposits not highly dissected. The property contains a pond and a brook. The swamp and mixed hardwood woodland are second-growth forests which have not been disturbed for 40 years. An open area is caused by the presence of an electric high-tension line. The rich flora includes many varieties of spring wildflowers.

Kent State University
Department of Biological Sciences
Kent 44240
(216) 672-2266

EAGLE CREEK STATE NATURE PRESERVE

(Scenic) 328 acres

Aptly called by its original protector "a textbook to walk through," the Eagle Creek preserve contains the history of a glacial stream which cut through Mississippian rocks to form a south-facing slope now boasting large white oaks, a north-facing slope of beech-maple forest, a meandering flood plain with buttonbush swamp, several small peat bogs, and marshlands. In the rolling uplands, which were formerly cornfields, young forests are developing by succession. Beaver lodges and beaver ponds, freshly excavated fox dens on the hillsides, and squirrel nests in the trees tell of animals unmolested by recent human habitation.

Sphagnum bogs which resemble spots in Lapland, winterberry holly, cotton sedge common in the Arctic, roundleaf yellow violets (the first ever found this far south), ostrich fern six feet tall, and many other plants beckon the botanist. Evidence of Indian camping and lookouts brings early Ohio history into the picture.

The area is now owned and managed by the Ohio Department of Natural Resources. Because the preserve is unique and, in parts, fragile, visitor access is by written permission, which will be granted to serious students only. Facilities are being developed.

Ohio Department of Natural Resources
Division of Natural Areas and Preserves
Fountain Square, Columbus 43224
(614) 466-6020

JENNINGS WOODS

72 acres

This choice wildflower habitat has been preserved because its owner was willing to sell it for half its worth and Kent State University was willing to purchase and protect it.

The area lies on the glaciated, gently rolling Allegheny Plateau, its thick glacial drift underlain by the Sharon coal and conglomerate of the Pennsylvanian series. The West Branch of the Mahoning River, a buttonbush swamp, a flood plain forest, a beech-maple forest, and an upland oak forest provide the environment for the rich flora observable in all seasons. An open area is present, due to a gas transmission line.

Kent State University
Department of Biological Sciences
Kent 44240
(216) 672-2266

TINKERS CREEK STATE NATURE PRESERVE

(Scenic) 786 acres

The prime feature of this preserve, upstream from Tinkers Creek Gorge in Cuyahoga County, is its extensive marsh, which occupies nearly 75 percent of the total acreage. Cattail, willow, buttonbush, and alder predominate in the marsh areas and their fringes, with shrubby dogwoods and red maple also common.

Several spring-fed lakes occur on the site, as well as bottomland forests of swamp white and pin oak and several old fields in various stages of plant succession. Drier sites are dominated by white, red, and chinquapin oak, American beech, and sugar maple. White pine, flowering dogwood, bigtooth and quaking aspen, and wild black cherry are also present.

Turtlehead, meadowsweet, swamp-loosestrife, bottle gentian, partridgeberry, northern arrowwood, and royal fern are just some of the representative flora found within the preserve. The diversity of habitats also offers the visitor excellent opportunities to see a variety of wildlife.

The preserve is owned and managed by the Ohio Department of Natural Resources. A system of hiking trails is available for visitor use. Off-trail access is by written permission only.

Ohio Department of Natural Resources
Division of Natural Areas and Preserves
Fountain Square, Columbus 43224
(614) 466-6020

RICHLAND COUNTY

FOWLER WOODS STATE NATURE PRESERVE

(Interpretive) 133 acres

Thanks to a farmer who appreciated his mature beech-maple forest hemmed in by broad agricultural fields and a service forester interested in natural area preservation, Fowler Woods was dedicated under the Ohio Natural Areas Act as a state nature preserve in January 1972.

The forest area, rising only slightly higher than a buttonbush swamp, contains many large maple, beech, and ash with an ungrazed understory. A woodchip trail leads through a great display of spring wildflowers before the canopy of leaves develops. Birds, too, are plentiful: from spring warblers to turkey vultures and scolding barred owls.

Spring in the natural swamp brings a medley of spring peepers and chorus frogs and such visual delights as marsh marigold, royal fern, buttonbush, and numerous other indigenous plants. Far removed from major highways, perhaps Fowler Woods' greatest attraction is its quietness, broken only by creatures of the forest.

A system of hiking trails, boardwalks, and a parking lot are available for visitor use, and a detailed interpretive booklet has also been prepared. Off-trail access is by written permission only.

Ohio Department of Natural Resources
Division of Natural Areas and Preserves
Fountain Square, Columbus 43224
(614) 466-6020

SENECA COUNTY

WICKWIRE-SHADE NATURE PRESERVE

40 acres

This parcel of land contains diverse habitat types including a two-acre wet area with some buttonwood, and a modified elm-ash woodland with some hickory. An intermittent stream cuts through the property and adds to the diversity in plant and animal life. The original beech forest has been cut but the site has never been plowed or cultivated. It was used as a woodlot and grazed, and reflects a high degree of disturbance.

The site lies on the northern edge of the Defiance moraine of the Wisconsinan age of glaciation, but is relatively flat. It is on the east side of the divide separating the Huron and Sandusky river drainage basins. The soils are poorly drained Blount soils, formed in high lime silty clay loam glacial till.

The tract was given to Heidelberg College by Mr. Wickwire and his daughter, Leona Ilene Hand, for use as an outdoor laboratory. The Nature Conservancy holds a reverter clause on the property.

Dr. Howard Hintz
Department of Biology
Heidelberg College
Tiffin 44883
(419) 448-2000

SUMMIT COUNTY

STUMPY BASIN

Approximately 250 acres

To the east of the Cuyahoga River and just south of the Ohio Turnpike is a 22-acre tract of cattails and alders long known as Stumpy Basin. The "Basin" was a large storage pond on the Ohio Canal, dredged beside the river for a canal boat turn-around. This tract now belongs to Kent State University.

To naturalists in the state, Stumpy Basin means a much larger, wild area bounded by the turnpike on the north, the Cuyahoga River on the west, an upland on the east, and the forests of the valley on the south toward Peninsula.

Because the valley had been blocked to the north by the wasting of the Wisconsinan glacier and by the Defiance end moraine on the south, a temporary narrow lake was formed and was responsible for the extensive deposition of silt and clay overlying glacial till. The 100-foot bluffs on the east consist of these clay-rich glacial deposits which result in excessive slumping. This has prevented the development of forests on several acres of dry land and encouraged virgin tall-grass prairie with typical species associated with it.

The streams draining into the river from the upland form gullies in the clay with an east-west orientation and provide north-facing slopes with cool microclimates on which is found vegetation typical of Canada: hemlock, Canada yew, trailing arbutus, and others.

The flood plain is heavily silted, year after year, and deltaic deposits of clay are found where the gullies end. These deposits, too, prevent the normal growth of trees and the result is a forest of pygmy trees—largely red elm. The trees are constantly being buried as the wet clay slumps and occasionally, in the process, lean downwards almost horizontal with the slump.

On other parts of the flood plain are found typical cattail marsh-alder swamp and swamp forest. Kent State University uses the silt-clay hillside for landslide research and

maintains a monitoring station for this purpose. On the gentle slopes is found mixed mesophytic forest with a rich understory of spring flowers; oak forest is found on higher ground.

The old canal and the river provide additional habitats. Some species appear to have migrated north along the Tuscarawas River, across the narrow and low divide, and on north along the Cuyahoga River. Add all these together and one of the richest vegetational complexes in Ohio in a relatively compact space results. Fortunately the area is quite inaccessible, explaining the reason for little disturbance. Fortunately, too, the total property is being considered for a state nature preserve as well as a segment of a proposed Cuyahoga Valley National Recreation Area.

J. Arthur Herrick
Kent State Universtiy
Biology Department
Kent 44240
(216) 672-2266

TRUMBULL COUNTY

TRUMBULL ARBORETUM

120 acres

This unusually rich area has much of interest for geologists, zoologists, and botanists and perhaps even more for the ecologist who can incorporate the views of each. Botanically, the site contains trees, shrubs, and wildflowers native to the region. It is a beech-maple forest, near climax, with other species in the association. The major work done by the Youngstown State University students has been on ferns, which are varied and abundant. Plantations of red, Austrian, white, jack, and Scotch pine, hemlock, larch, arborvitae, redgum, birch, and maple are present.

Geologically, the property is on the glaciated, rolling Allegheny Plateau, underlain partly by Sharon conglomerate, the basal formation in the Pennsylvanian series of the Paleozoic era. Ledges of the Sharon outcrop can be found near the north boundary. Animals associated with the beech-maple community are present.

Use is restricted to serious work by students.

Youngstown State University
Department of Biology
Youngstown 44503
(216) 747-1492

WARREN COUNTY

CAESAR CREEK GORGE STATE NATURE PRESERVE

(Scenic) 463 acres

This wild and scenic nature preserve was recently acquired by the state and promises to be one of the most outstanding acquisitions in the state nature preserve system. Caesar Creek is a tributary of the Little Miami River, which was created by glacial stream diversion, producing great volumes of meltwater cutting through the Ordovician limestones and shales. This tributary shares the picturesque quality of the major stream. It formed a narrow gorge, heavily wooded with mature stands of beech, maple, hickory, walnut, and oak with a rich herbaceous flora on the forest floor.

The area is owned and managed by the Ohio Department of Natural Resources. While a few rugged hiking trails exist in the gorge, permanent trails have not yet been established. Until they are completed, access will be by written permission only.

Ohio Department of Natural Resources
Division of Natural Areas and Preserves
Fountain Square, Columbus 43224
(614) 466-0020

WASHINGTON COUNTY

FALLS RUN TRAIL

30 acres

A tremendous experience is inevitable for those serious nature students who walk the mile-long Falls Run Trail from a township road to the large overhang on the edge of the adjacent Girl Scout property. Fall Run has eroded through a massive layer of Permian age sandstone to form cliffs and overhangs. Ecologically, the narrow, rockbound valley manages to maintain a cool, moist environment which, in turn, permits glacial relict vegetation to persist.

Hemlocks, some very large, as well as laurel, partridgeberry, Christmas and polypody ferns, rattlesnake plantain and other orchids, teaberry, and striped wintergreen are among the choice plants on or near the trail. Large beech, oak, walnut, and hickory are found in the upland forest.

The stream cascades over a resistant top layer of the sandstone to form a beautiful waterfall, below which are several deep pools. Residual soils, depositional features of the stream, as well as erosional features and aquatic and small land animals may be observed. For permission and directions contact:

Mr. and Mrs. Gene Gribble
Route 1, Cutler 45724
(614) 678-2078

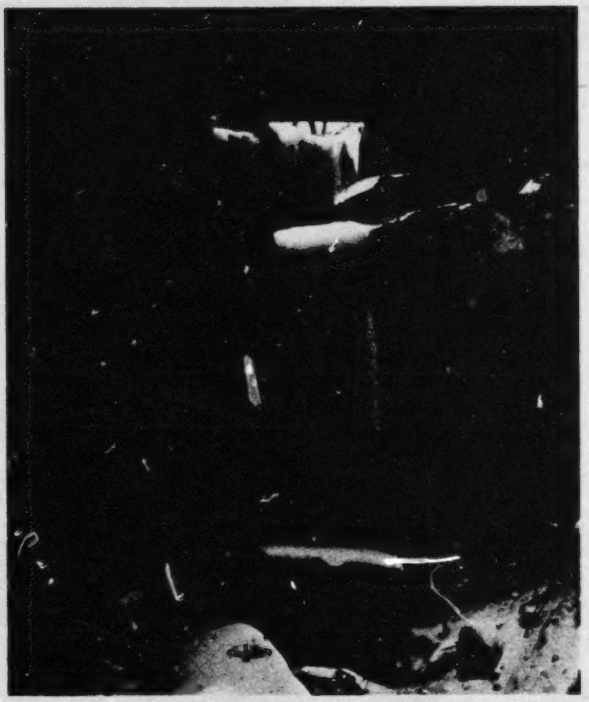
NATURAL BRIDGE

80 acres

This unusual natural rock bridge spans an outstandingly beautiful ravine in a remote part of the county. The bridge is 60 feet long and 12 feet wide, a geologic phenomenon created by headward erosion in a densely cemented upper layer of sandstone and the jointing system characteristic of this particular rock. It makes a cool moist environment which permits glacial relict vegetation typical of a northern woods to persist at the head of the valley. Huge hemlocks extend high above the rock layer. Masses of polypody fern, beds of partridgeberry, mountain laurel, liverwort, and mosses grow abundantly on the rocks. Down below where the valley widens out and the little creek joins the parent stream, majestic tuliptree, oak, and other hardwoods make the woodland canopy.

The site is unique in Ohio for its geologic significance, plant and animal associations, and local history. The property has been protected and cherished for several generations by one family whose members are still anxious to maintain it for future generations. They have welcomed in the past and will continue to welcome serious students and adults who wish to study this beautiful natural bridge and its relationship to all parts of its environment. It deserves protection and great appreciation. It is necessary to sign a liability release statement when permission is obtained to visit the property.

Mrs. Alice Ladd
Natural Bridge
Box 242, Cutler 45724



WAYNE COUNTY

BROWN'S LAKE BOG

80 acres

This tract of land is recognized by geologists to be a kettle hole, a depression resulting from a large chunk of ice breaking off from a wasting glacier. It is a unique ecological area in that it shows plant zones from the small lake and acid bog to mature upland forest. Rare and unusual plants have been found in the past, plants known to be persistent glacial relicts typical of northern bogs.

Unfortunately, the ecology of Brown's Lake Bog is changing. Poison sumac has encroached, which causes the deterioration of other vegetation.

The bog was registered as a National Natural Landmark in 1968. The College of Wooster, under a long-term lease from the Nature Conservancy, is now its custodian. A publication by John Aughanbaugh and O.D. Diller, *Flora of Brown's Lake Bog*, May 1968, is available from either of the two sources below.

The College of Wooster
Department of Biology
Wooster 44691
(216) 264-1234. Ext. 379

Dr. O.D. Diller
1368 East Wayne Avenue, Wooster 44691
(216) 264-0944

PEE WEE HOLLOW WILDERNESS AREA
190 acres

One hundred years ago a stagecoach ride past Pee Wee Hollow was one of the scenic journeys to the Killbuck Plain. The densely wooded hillsides were eventually heavily lumbered, which resulted in deeper, eroded ravines and periodic flooding.

The degraded land was purchased in 1923 through contributions to a Boy Scout renovation project. Tuliptree, walnut, various oaks, and maple were planted on a seven-acre plot. A snowbreak of white and Austrian pine was designed to prevent serious drifting along the road. One troop covered the once-barren hillsides with white and red pine 18 years ago. Natural succession and controlled camping have maintained the delicate balance between conservation and preservation. The area is an excellent example of once-mismanaged acreage restored by sound conservation practices to a richly wild state.

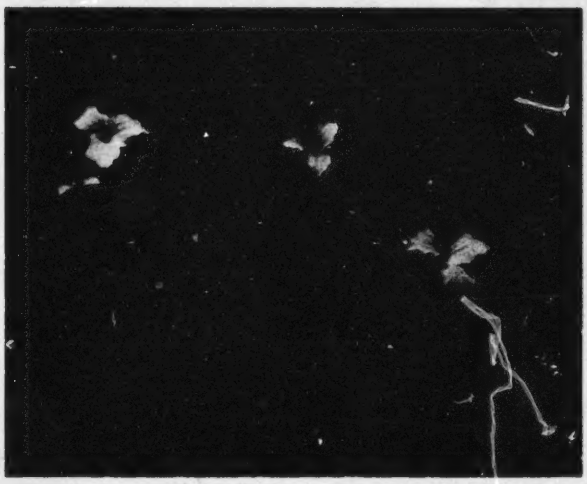
A tour of Pee Wee Hollow begins where Shade Creek enters the reservation. The shallow valley is underlain by Mississippian shale. The swampy area contains marsh marigold, trees not afraid to get their feet wet, and other bog vegetation. The slopes of the valley, now protected from grazing, have produced healthy stands of hardwoods which include cucumber magnolia, rare in Wayne County.

Tributaries of Shade Creek have a rapid rate of fall, cutting vertical faces and exposing rock strata, creating habitat for great varieties of wildflowers and understory woody plants. In the cool ravines, patches of partridgeberry, trailing arbutus, wintergreen, and other northern plants are abundant. Indian mounds and artifacts within the reservation add an interesting phase to the ecological study.

This reservation is maintained by a small corporation for restricted and supervised camping and hiking by older Scouts. The group is glad to conduct tours and share their achievement with those who wish to profit from their experiences. Use is restricted to this purpose or serious ecological research.

Mr. Robert Wheeler
1529 Hickory Lane, Wooster 44691
(216) 264-6464

WILLIAMS COUNTY



OPDYCKE WOODS
45 acres

This private tract of land is reported to be similar to and compare favorably with Goll Woods in Fulton County. The "nearly virgin" woods has trees up to four feet in diameter. These are varieties typical of the wet-dry lake plain province, an area covered with silt, sand, and clay from ancient lakes created as the glacier wasted back.

Bur oak, white oak, hickory, basswood, beech, ash, elm, and the maples predominate in the association. The display of wildflowers is excellent and small mammals may be seen. Permission to visit or study will be restricted to responsible persons.

Emerson Opdycke
Route 2, Stryker 43557
(419) 682-2108

WOOD COUNTY

STEIDTMANN WILDLIFE SANCTUARY
65 acres

This property is a laboratory used by Bowling Green State University's Biology Department to obtain data on microclimates. It has a building and two towers for research purposes. The land lies on the glaciated, flat Lake Plain, with a thin covering of drift. The Silurian age Monroe dolomite is exposed in places.

The site is partially wooded with the mixed oak forest type, with pin oak, elm, and buttonbush in low spots. A pond provides water habitat. Permission for use will be granted only to science-oriented senior high school or adult groups or individuals.

Bowling Green State University
Biology Department
Bowling Green 43402
(419) 372-2332

SUMMARY of OHIO OUTDOOR EDUCATION AREAS

– CHART LEGEND –
Natural Environment · NE
School Camping · SC
Conservation Education · C
Undeveloped · U
Nature Preserve · NP
Available · +

COUNTY	TYPE of AREA	ACREAGE or MILES	SHELTER	DRINKING WATER	SANITARY FACILITIES	PICNIC TABLES	PARKING	HIKING TRAILS	GUIDE SERVICE	CHARGE	CAMPING
ADAMS											
ADAMS LAKE PRAIRIE STATE NATURE PRESERVE	NP	23		+	+	+	+	+			
ADAMS LAKE STATE PARK	NE	96	+	+	+	+	+				
BRUSH CREEK STATE FOREST	U	11,760					+	+			
BUZZARDROOST ROCK	NP	152						+			
EDWIN H. DAVIS STATE MEMORIAL	NE	88					+	+			
SERPENT MOUND STATE MEMORIAL	NE	60	+	+	+	+	+	+			
SHAWNEE STATE FOREST (See Scioto County)	U	58,160									
SPARROWOOD NATURE AREA	NP	90					+	+			
TRANQUILITY STATE WILDLIFE AREA	NE	3,581					+				
THE WILDERNESS (Charles A. Eulett Preserve)	NP	320					+	+			
WOODLAND ALTARS	SC	430	+	+	+	+	+	+		+	+
ALLEN											
DEEP CUT PARK	NE	6	+	+	+	+	+				
FORT AMANDA GUN CLUB AREA	NE	148	+	+	+	+	+	+			
JOHNNY APPLESEED METROPOLITAN PARK DISTRICT		202									
Heritage Park	NE		+		+	+	+				
Teddy Bear Park	NE		+	+		+	+	+			
LIMA LAKE	C-NE	85					+				
LOST CREEK RESERVOIR	NE	112					+				
SWINGING BRIDGE NATURE PRESERVE	NE	104	+	+	+	+	+	+	+		
WINONA LAKE	NE	50		+	+	+	+	+			
ASHLAND											
CAMP JUDSON HILLS	SC	280	+	+	+	+	+	+		+	
CAMP WESLEY	SC	120	+	+	+	+	+	+	+		+
CHARLES MILLS LAKE	NE	3,400		+	+	+	+				+
CLEAR FORK GORGE STATE NATURE PRESERVE	NP	51	+	+	+	+	+	+	+		+
CRALL WOODS	NP	55					+				
HICKORY OAKS CAMPGROUND	NE	123		+	+	+	+				+
HILLSDALE OUTDOOR EDUCATION AREA	NE	120					+	+			
MOHICAN STATE PARK & FOREST	NE	5,385	+	+	+	+	+	+	+		+
PLEASANT HILL LAKE	NE	2,340		+	+	+	+			+	+
WILLIS WOODS	NE	42	+	+	+		+	+			
YOUKO'S SAND & GRAVEL OPERATION	NE	300		+	+		+				
ASHTABULA											
BEAUMONT SCOUT RESERVATION	SC	1,200		+	+	+	+	+			+
BUCCANEER CAMPSITES	NE	270	+	+	+	+	+	+	+	+	+
CAMP KENISEE	NE	170	+	+	+	+	+	+		+	+
CAMP KOINONIA	SC	250	+	+	+	+	+	+			+
CAMP LUTHER	SC	66	+	+	+	+	+	+		+	+
CAMP UNALIA	SC	190	+	+	+	+	+	+			+
CAMP WHITEWOOD	SC	230	+	+	+	+	+	+		+	+
GENEVA STATE PARK	NE	682		+	+	+	+				
NEW LYME STATE WILDLIFE AREA	NE	529					+				
ORWELL STATE WILDLIFE AREA	NE	193					+				
PYMATUNING STATE PARK	NE	4,919	+	+	+	+	+	+	+	+	+
SAM WHARRAN NATURE PRESERVE	NP	35				+	+	+			
ATHENS											
BUCKEYE TRAIL	NE	8 miles	+								
DESONIER STATE NATURE PRESERVE	NP	301									
GIFFORD STATE FOREST	U	320									
HOCKING VALLEY SCENIC RAILWAY (See Hocking County)							+	+		+	
STROUDS RUN STATE PARK	NE	2,806	+	+	+	+	+	+	+		+
TRIMBLE STATE WILDLIFE AREA	NE	2,091		+							
WATERLOO STATE WILDLIFE EXPERIMENT STATION	NE	1,250		+	+	+	+	+	+		
WAYNE NATIONAL FOREST	U	162,000									
Utah Ridge Recreation Site			+	+	+	+	+	+			
AUGLAIZE											
CAMP ST. MARY	NE	105	+	+	+	+	+			+	+
FORT AMANDA STATE MEMORIAL	NE	10		+	+	+	+				
HOGE WOODS	NE	41					+				
LUNZ HEADWAY	NE	10									
POHLMAN WILDLIFE HABITAT	NE	25	+	+			+	+			
ST. MARY'S STATE FISH HATCHERY	C	71					+				

— CHART LEGEND —
Natural Environment · NE
School Camping · SC
Conservation Education · C
Undeveloped · U
Nature Preserve · NP
Available · +

COUNTY	TYPE of AREA	ACREAGE or MILES	SHELTER	DRINKING WATER	SANITARY FACILITIES	PICNIC TABLES	PARKING	HIKING TRAILS	GUIDE SERVICE	CHARGE	CAMPING
— BELMONT —											
BARKCAMP STATE PARK	NE	1,121		+	+	+	+	+			+
CAMP COONEY	NE	58	+	+	+	+	+	+			+
CAMP PIEDMONT	SC	40	+	+	+	+	+	+			+
DYSART WOODS	NP	40					+	+			
PIEDMONT LAKE	NE	6,800		+	+	+	+	+			+
RAVEN ROCKS	NE	100				+	+	+			
UNION SCHOOL LAND LABORATORY	NE	50		+	+		+				
— BROWN —											
BUCKEYE TRAIL	NE	9 miles									
GOOSE RUN VALLEY	NE	10									
GRANT LAKE STATE WILDLIFE AREA	NE	412		+	+	+	+				+
GRIFFITH FARM	C	195									
INDIAN CREEK STATE WILDLIFE AREA	NE	1,548		+	+		+	+			
MT. ORAB OUTDOOR EDUCATION CENTER	NE	8		+	+		+	+	+		
OHIO RESEARCH & DEVELOPMENT CENTER	C	260			+		+				
— BUTLER —											
BUTLER COUNTY PARK DISTRICT											
Crawford Home & Woods	NE	5		+	+		+		+		
Four Mile Creek Park	NE	22		+	+	+	+	+			
Governor Bebb Park	NE	230	+	+	+	+	+	+			+
Indian Creek Burial Ground	H	2									
Indian Creek Park	NE	150	+	+	+	+	+	+			+
Miami and Erie Canal Park	NE	170		+	+	+	+	+			
Pater Park	NE	200	+	+	+	+	+	+		+	+
Rentschler Forest Preserve	NE	27			+	+	+	+			
St. Clair Recreation Area	NE	28				+	+				
CAMP CAMPBELL GARD		175	+	+	+	+	+	+	+	+	+
CLIFFVIEW OUTDOOR EDUCATION CENTER	NE	30	+	+	+	+	+	+	+		
FANTASY FARM	C	150			+		+	+	+	+	
HUESTON WOODS STATE NATURE PRESERVE	NP	200	+	+	+	+	+	+	+		+
HUESTON WOODS STATE PARK	NE	3,584		+	+	+	+	+	+	+	+
PATER STATE WILDLIFE AREA	NE	192		+	+	+	+	+			
SILVOOR BIOLOGICAL SANCTUARY	NP	15					+	+			
SPRING HILL NATURE CENTER	NE	11					+	+			
— CARROLL —											
ATWOOD LAKE	NE	4,120	+	+	+	+	+	+			+
BUCKEYE TRAIL	NE	9 miles									
CAMP ALDERSGATE	SC	40	+	+	+	+	+	+		+	+
CAMP FALCON	SC	750	+	+	+	+	+	+		+	+
CAMP MUSKINGUM	C-SC	256	+	+	+	+	+	+		+	+
CAMP WAKONDA	SC	97	+	+	+	+	+	+		+	+
[illegible] HILLS TREE FARM	C	180		+	+	+	+	+		+	+
HIGH HOPES HOLIDAY HOUSE	NE	13	+	+	+	+	+	+		+	+
LEESVILLE LAKE	NE	3,820	+	+	+	+	+	+			+
ROLLING Y RANCH	SC	600	+	+	+	+	+	+			+
TWIN VALLEY FARM	NE	385	+	+	+	+	+	+		+	+
— CHAMPAIGN —											
CAMP SHAWANO	NE	185	+	+	+	+	+	+	+		
CEDAR BOG NATURE PRESERVE	NP	203									
CEDAR FARM	C	140		+		+	+	+			
GRAHAM LOCAL SCHOOLS OUTDOOR EDUCATION AREA	NE	63			+			+			
KISER LAKE STATE PARK	NE	964	+	+	+	+	+	+			+
KISER LAKE WETLANDS STATE NATURE PRESERVE	NP	50		+	+	+	+				
OHIO CAVERNS	NE	100	+	+	+	+	+		+	+	
SIECENTHALER FARM	NE	18					+				
URBANA STATE WILDLIFE AREA	NE	540		+			+				
— CLARK —											
BUCK CREEK STATE PARK	U										
CLARK LAKE STATE WILDLIFE AREA	NE	280		+	+	+	+				
GEORGE ROGERS CLARK PARK	NE	150	+	+	+	+	+	+			
GUNDOLF'S FARM	NE	95	+	+	+	+	+	+		+	+
NORTH HIGH SCHOOL LAND LABORATORY	NE	92					+	+			
SNYDER PARK	NE	200	+	+	+	+	+				

– CHART LEGEND –
Natural Environment - NE
School Camping - SC
Conservation Education - C
Undeveloped - U
Nature Preserve - NP
Available - +

COUNTY	TYPE of AREA	ACREAGE or MILES	SHELTER	DRINKING WATER	SANITARY FACILITIES	PICNIC TABLES	PARKING	HIKING TRAILS	GUIDE SERVICE	CHARGE	CAMPING
CLERMONT											
BUCKEYE TRAIL	NE	27 miles									
CAMP EDGAR FRIEDLANDER AND CRAG WILDERNESS	NE	860		+	+	+	+	+			
CAMP SIMMS	NE	23	+	+	+	+	+	+		+	+
CHRIST CHURCH CAMP	NE	100	+	+	+	+	+	+		+	
CINCINNATI NATURE CENTER	NE	680	+	+	+		+	+			
CLERMONT NORTHEASTERN LAND LABORATORY	NE	122		+	+		+	+	+	+	
EAST FORK STATE PARK	U		+	+	+	+	+	+			
STONELICK STATE PARK	NE	1,210		+	+	+	+				
WILDWOOD CHRISTIAN EDUCATION CENTER	NE	250	+	+	+		+	+	+		+
CLINTON											
CAMP KIRKWOOD	SC	250	+	+	+	+	+	+		+	+
CHERRYBEND PHEASANT FARM	C	375	+			+	+	+			
COWAN LAKE STATE PARK	NE	1,775		+	+	+	+	+	+		+
COLUMBIANA											
BEAVER CREEK STATE PARK	NE	2,405		+	+	+	+	+	+		+
BEAVER CREEK UNITED PRESBYTERIAN CAMP	SC	120	+	+	+	+	+	+		+	+
BEAVERKETTLE FARM	NE	4,000						+			
BOY SCOUT CAMP	NE	423		+			+				+
CAMP MERRYDALE	SC	17	+	+			+				
CAMP PAUL E. DEAN	NE	82	+		+	+	+	+			+
FIRESTONE HOMESTEAD FARMS AND TEST CENTER	C	800		+	+	+	+	+			
GUILFORD LAKE STATE PARK	NE	488	+	+	+	+	+		+		
HIGHLANDTOWN LAKE STATE WILDLIFE AREA	NE	2,035		+	+	+	+				+
YELLOW CREEK STATE FOREST	U	756					+				
ZEPERNICK LAKE STATE WILDLIFE AREA	NE	513		+	+		+				
COSHOCTON											
CAMP MUMAC	C-NE	40	+	+	+	+	+	+			+
MOHAWK RESERVOIR	NE	3,700		+	+	+	+				
MOHICAN RIVER ACCESS	NE	370									
MUSKINGUM VALLEY SCOUT RESERVATION	NE	500		+	+	+	+	+			+
PILGRIM HILLS CONFERENCE CENTER	SC	200	+	+	+	+	+	+			
PROJECT BOYS & EARTH CAMP	C	564	+	+		+	+	+	+	+	+
TRIPLE LOCKS PARK & CANAL BOAT TRIP AT ROSCOE	NE-H		+	+	+	+	+	+	+	+	+
WILLS CREEK LAKE	NE	3,690		+	+	+	+	+			
WOODBURY STATE WILDLIFE AREA	NE	2,000		+		+	+				+
CRAWFORD											
AMANN RESERVOIR	NE	156	+	+	+	+	+	+			
BARTHOLOMEW WOODS	NE-U	20									
CAMP MICHAEL YOUTH COMMUNITY CAMP	NE	35	+	+	+	+	+	+	+		+
CRANBERRY TOWNSHIP BRICK ARCH	NE	80					+				
TSCHANEN WOODLAND TRACT	NP	26					+	+	+		
CUYAHOGA											
BUCKEYE TRAIL	NE	34 miles									
CLEVELAND METROPOLITAN PARK DISTRICT											
Bedford Reservation-Tinkers Creek Gorge	NE	1,335	+	+	+	+	+	+			
Big Creek	NE	534	+	+	+	+	+	+			
Bradley Woods	NE	788	+	+	+	+	+	+	+		
Brecksville Reservation	NE	2,768	+	+	+	+	+	+	+		
Euclid Creek	NE	351	+	+	+	+	+	+	+		
Huntington Reservation (see Lake Erie Jr. Nature & Science Center)	NE	105	+	+	+	+	+	+	+		
North Chagrin Reservation	NE	1,719	+	+	+	+	+	+	+		
Rocky River Reservation	NE	5,614	+	+	+	+	+	+	+		
South Chagrin Reservation	NE	614	+	+	+	+	+	+	+		
CLEVELAND ZOOLOGICAL PARK	C	125	+	+	+	+	+				
GARDENVIEW HORTICULTURAL PARK	C	18							+		
INDEPENDENCE SCHOOLS OUTDOOR EDUCATION CENTER	NE	35	+	+	+	+	+		+		
LAKE ERIE JUNIOR NATURE & SCIENCE CENTER	NE	105	+	+	+		+	+			
SHAKER LAKES REGIONAL NATURE CENTER	NE	275		+	+		+	+			
SIEDEL FUN FARM	C	83	+	+	+		+	+			
SOUTH EUCLID LYNDHURST ENVIRONMENTAL CENTER	C	5		+	+	+	+	+	+	+	
TINKERS CREEK GORGE	NP	400	+	+	+		+	+			
WARRENSVILLE HEIGHTS LAND LABORATORY	NE	18				+	+	+			

– CHART LEGEND –
Natural Environment · NE
School Camping · SC
Conservation Education · C
Undeveloped · U
Nature Preserve · NP
Available · +

COUNTY	TYPE of AREA	ACREAGE or MILES	SHELTER	DRINKING WATER	SANITARY FACILITIES	PICNIC TABLES	PARKING	HIKING TRAILS	GUIDE SERVICE	CHARGE	CAMPING
DARKE											
DARKE COUNTY STATE WILDLIFE AREA	NE	315					+				
GREENVILLE CITY PARK	NE	90	+	+	+	+	+				
SPORTS HAVEN	C	92	+	+	+	+	+	+	+		+
WAYNE LAKES	C	527	+	+	+	+	+	+	+		
DEFIANCE											
AUGLAIZE RIVER POWER DAM	C-NE	15									
AU GLAIZE VILLAGE AND WOODS	NE	120	+		+	+	+	+	+		+
CAMP EDWARD DRUMMOND LIBBEY	NE	150	+	+	+		+	+		+	+
CAMP FORT DEFIANCE	SC	5	+	+	+	+	+			+	+
FAIRVIEW HIGH SCHOOL CONSERVATION LAND LABORATORY	C-NE	5				+	+	+			
FIVE MILE CREEK ACCESS	NE	5		+	+		+				
INDEPENDENCE DAM STATE PARK	NE	606	+	+	+	+	+	+			+
KRILL'S LAKE	NP	30		+	+		+				
OXBOW LAKE STATE WILDLIFE AREA	NE	313		+	+		+				
SHAWNEE SCOUT RESERVATION	NE	650		+	+	+	+	+			+
TREE FARM (THE)	NE	78					+	+			
DELAWARE											
BIG WALNUT ECOLOGICAL CENTER		38	+			+	+	+	+		
BLUE LIMESTONE PARK	NE	16	+	+	+	+	+				
CAMP LAZARUS	SC	300	+	+	+	+	+	+			+
COLUMBUS ZOOLOGICAL GARDENS	C	100	+	+	+	+	+		+	+	
DELAWARE STATE PARK	NE	7,378		+	+	+	+	+	+		+
DELAWARE STATE WILDLIFE AREA	NE	7,600		+	+	+	+				
GALENA SHALE TILE & BRICK CO.	C	100									
GREENWOOD LAKE CAMP	NE	87	+	+	+	+	+	+			+
HIGHBANKS METROPOLITAN PARK	NC	1,055	+	+	+	+	+	+	+		
HIGHBANKS METROPOLITAN PARK STATE NATURE PRESERVE	NP	206	+	+	+	+	+	+	+		
OLENTANGY INDIAN CAVES	NE	91	+	+	+	+	+	+	+	+	+
O'SHAUGHNESSY RESERVOIR	C-NE	314	+		+	+	+	+			
USDA RESEARCH LABORATORIES	C	1,143						+		+	
WILLIAM POWELL EDUCATIONAL LABORATORY, BUCKEYE VALLEY HIGH SCHOOL	C-NE	300				+	+	+	+		
ERIE											
BLUE HOLE	NE	10			+	+	+			+	
CAMP TIMBERLANE	SC	324	+	+	+	+	+	+		+	+
ERIE COUNTY 4-H CAMP	SC	21	+	+	+	+	+	+			+
GALPIN WILDLIFE PRESERVE	NP	37	+	+	+	+	+	+			
GLACIAL GROOVES STATE MEMORIAL	NE	3½					+				
KELLEYS ISLAND STATE PARK	NE	601		+	+	+	+		+		+
MILAN STATE WILDLIFE AREA	NE	296					+				
NORTH CENTRAL BRANCH OARDC	C-NE	335						+			
RESTHAVEN STATE WILDLIFE AREA	NE	2,210		+	+		+				
SHELDON'S FOLLY	NE	64		+	+	+	+	+			
FAIRFIELD											
BARNEBEY CENTER FOR ENVIRONMENTAL STUDIES	NE	985	+	+	+	+	+	+		+	
FAIRFIELD UNION LAND LABORATORY	NE	134	+	+	+		+	+		+	
GENEVA HILLS	SC	250	+	+	+	+	+	+	+	+	+
GREENFIELD DAM AND STATE WILDLIFE AREA	NE	46					+				
LOCKVILLE LOCKS	NE	2		+	+	+	+				
OLIVEDALE PARK	NE	16	+			+	+	+			
RISING PARK AND MOUNT PLEASANT	NE	75	+	+	+	+	+	+			
ROCK MILL DAM STATE WILDLIFE AREA	NE	83					+				
SHALLENBERGER STATE NATURE PRESERVE	NP	87									
TARLTON CROSS MOUND	NE	16		+	+	+	+				
WAHKEENA	NP	150	+	+	+		+	+	+		
FAYETTE											
CAMP GIPIWA	NE	37	+	+	+		+	+		+	+
CAMP PINE	NE	17		+	+	+	+	+			+
EYMAN ESTATE FOREST	NE	298									

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COUNTY	TYPE of AREA	ACREAGE or MILES	SHELTER	DRINKING WATER	SANITARY FACILITIES	PICNIC TABLES	PARKING	HIKING TRAILS	GUIDE SERVICE	CHARGE	CAMPING
FRANKLIN											
BLACKLICK WOODS METROPOLITAN PARK STATE NATURE PRESERVE	NP	55	+	+	+	+	+	+	+		
BOYER PARK	NE	11					+	+			
BROOKSIDE LAND LABORATORY	NE	3		+	+		+				
CAMP GAN MAH TOV	NE	28	+	+	+	+	+	+		+	+
CAMP JOHNSON	NE	87	+	+	+		+	+		+	+
CAMP MARY ORTON	SC	76	+	+	+	+	+	+		+	+
COLONIAL HILLS LAND LABORATORY	NE	8					+				
COLUMBUS CITY PARKS											
Alum Creek Park	NE	102		+	+	+	+				
Big Run Park	NE	277			+	+	+				
Big Walnut Park	NE	136	+	+	+	+	+	+			+
Cherry Bottom Park	U	94									
Franklin Park	NE	100	+	+	+	+	+	+			
Glen Echo Park	NE	4	+	+	+	+	+	+			
Griggs Reservoir	NE	558	+	+	+	+	+	+			+
Hayden Run Falls	NE	2									
Hoover Dam & Reservoir	NE	4,773	+	+	+	+	+	+			+
Olentangy Parkway	U	358						+			
Three Rivers Park	U	390									
Whetstone Park	NE	181	+	+	+	+	+	+			
DEMONSTRATION SCHOOL FOREST & LAND LABORATORY	NE	100	+		+	+	+	+	+		
FLINT RAVINE	NE	40						+			
FRIENDSHIP PARK	NE	22	+	+	+	+	+	+	+		
GAHANNA WOODS PARK	NE	50	To be developed								
GAHANNA WOODS STATE NATURE PRESERVE	NP	50						+			
GRANDVIEW HEIGHTS OUTDOOR EDUCATION AREA	NE	10	+	+	+	+	+				
GREENLAWN CEMETERY	NE	341									
INDIAN RUN RAVINE LAND LABORATORY	NE	9					+	+			
INDIAN VILLAGE CAMP	SC	8		+	+		+			+	+
JEWISH CENTER OUTDOOR AREA	NE	50	+	+	+	+	+	+			
MARBLE CLIFF QUARRIES	NE	1,000									
METROPOLITAN PARKS OF COLUMBUS & FRANKLIN COUNTY											
Blacklick Woods Met. Park	NE	633	+	+	+	+	+	+	+		
Blacklick Woods Met. Park State Nature Preserve	NP	55	+	+	+	+	+	+	+		
Blendon Woods Met. Park	NE	577	+	+	+	+	+	+	+		
Darby Creek Met. Park	NE	359	+	+	+	+	+	+	+		
Sharon Woods Met. Park	NE	760	+	+	+	+	+	+	+		
PRAIRIE LINCOLN LAND LABORATORY	NE	7					+	+			
ROCKY FORK NATURAL AREA	NP	15					+	+			
ST. TIMOTHY OUTDOOR EDUCATION AREA	NE	10					+	+			
SHAWNEE BRANCH - MARBLE CLIFF QUARRIES	NE	200					+				
SOUTH BRANCH HOOVER "Y" PARK	SC	68	+	+	+	+	+	+		+	+
WORTHINGTON HIGH SCHOOL LAND LABORATORY	NE	15					+	+			
WORTHINGWAY LAND LABORATORY	NE	8					+	+			
FULTON											
CAMP PALMER	SC	142	+	+	+	+	+	+		+	+
FULTON POND STATE WILDLIFE AREA	NE	38					+				
GOLL WOODS STATE NATURE PRESERVE	NP	322					+	+			
HARRISON LAKE STATE PARK	NE	245	+	+	+	+	+				+
MAUMEE STATE FOREST	NE	3,068					+	+			
GALLIA											
BOB EVANS FARMS	C	1,100	+	+	+	+	+	+			
CAMP FRANCIS ASBURY	SC	300	+	+	+	+	+	+		+	+
GALLIPOLIS AND THE ROLLER DAM	C-NE	92			+		+				
TYCOON LAKE STATE WILDLIFE AREA	NE	884									
GEAUGA											
AQUILLA LAKE STATE WILDLIFE AREA	NE	89		+	+	+	+				
AUBURN MARSH STATE WILDLIFE AREA	NE	461					+				
BIG CREEK PARK	NE	635	+	+	+	+	+	+	+		+
BUCKEYE TRAIL	NE	31 miles									
BURTON MEMORIAL FOREST	NE	32					+				
CAMP HO MITA KODA	SC	85	+		+	+	+	+		+	+
GEAUGA LAKE	NE	276	+	+	+	+	+				
HALLE PARK	NE	300		+	+			+			+
HAMBDEN ORCHARD STATE WILDLIFE AREA	NE	841					+				

– CHART LEGEND –
Natural Environment · NE
School Camping · SC
Conservation Education · C
Undeveloped · U
Nature Preserve · NP
Available · +

COUNTY	TYPE of AREA	ACREAGE or MILES	SHELTER	DRINKING WATER	SANITARY FACILITIES	PICNIC TABLES	PARKING	HIKING TRAILS	GUIDE SERVICE	CHARGE	CAMPING
GEAUGA (Cont.)											
HIGHBROOK LODGE	SC	50		+	+	+	+	+		+	+
METALS PARK	C-NE	500					+	+			
PUNDERSON STATE PARK	NE	733	+	+	+	+	+	+	+		+
RED RAIDER CAMPS	SC	300	+	+	+	+	+	+		+	+
RICHARD'S CAMP	NE	50	+	+	+	+	+	+		+	+
RIVER PARK	NE	50		+	+	+	+				
STEBBIN'S GULCH	NP	800		+	+		+	+			
SUNRISE FARM	C-NE	173		+	+		+	+	+	+	
THOMPSON LEDGE PARK	NE	31	+	+	+	+	+				
WHITLAM MEMORIAL FOREST	NP	100					+	+			
GREENE											
BEAVER CREEK SCHOOLS LAND LABORATORY	NE	46					+				
BERGAMO CONFERENCE CENTER	NE	265					+				
BUCKEYE TRAIL	NE	41 miles									
CENTRAL STATE UNIVERSITY OUTDOOR EDUCATION AREA	NE	68	+	+	+	+	+	+			
CLIFTON GORGE OR JOHN L. RICH STATE NATURE PRESERVE		255	+	+	+	+	+	+	+		+
DAYTON-MONTGOMERY COUNTY PARKS											
Huffman Reserve	NE	197	+	+	+	+	+	+			
Sugarcreek Reserve	NE	565				+	+	+			
GLEN HELEN NATURE PRESERVE & OUTDOOR EDUCATION AREA	NE-SC	960					+	+	+		+
GREENE COUNTY FISH & GAME FARM	C	130		+	+		+	+			
GREENE COUNTY PARKS	NE			+	+	+	+				
Park I	NE	50	+	+	+	+					
Park II	NE	5					+				
Park III	NE	50					+				
Park IV	NE	10									
JOHN BRYAN STATE PARK	NE	881	+	+	+	+	+	+	+		+
JOHN L. RICH STATE NATURE PRESERVE OR CLIFTON GORGE		255	+	+	+	+	+	+	+		+
SPRING VALLEY STATE WILDLIFE AREA	NE	841		+	+	+	+	+			
GUERNSEY											
BUCKEYE TRAIL	NE	36 miles									
MOORE MEMORIAL WOODS	NP	78			+		+	+			
ROLLING HILLS SCHOOL OUTDOOR EDUCATION AREA	NE	154		+			+	+			
SALT FORK STATE PARK	NE	20,143		+	+		+	+	+		+
SENECAVILLE NATIONAL FISH HATCHERY	C	118		+	+	+	+	+	+	+	
SPRUCE VALLEY	NE	20		+	+	+	+	+			
HAMILTON											
BUCKEYE TRAIL	NE	13 miles									
CITY OF CINCINNATI PARK SYSTEM											
Ault Park	NE	223	+	+	+	+	+	+			
Burnet Woods	NE	88	+	+	+	+	+	+	+		
Caldwell Park	U	122					+	+			
Eden Park	NE	184		+	+	+	+	+			
Hauck, Cornelius J., Botanic Garden	NE	8			+		+				
Memorial Pioneer Cemetery	NE	2					+				
Mt. Airy Forest	NE	1,500	+	+	+	+	+	+			+
Stanbery Park	NE	78	+	+	+	+	+	+	+		
CINCINNATI RECREATION COMMISSION OUTDOOR EDUCATION PROGRAM											
Avon Woods	NE	15	+	+	+		+	+			
California Woods (Cincinnati Waterworks Park)	NE	75	+	+	+		+	+			
LaBoiteaux Woods	NE	54	+	+	+		+	+			
CINCINNATI ZOO	C	62		+	+	+	+			+	
HAMILTON COUNTY PARK DISTRICT											
Farbach-Werner Nature Preserve	U	23	To be developed								
Miami Whitewater Forest	NE	1,955		+	+	+	+	+	+		+
Sharon Woods	NE	740		+	+	+	+	+	+		+
Shawnee Lookout	U	1,010									
Winton Woods	NE	2,045		+	+	+	+	+	+		+
INDIAN HILL SCHOOLS OUTDOOR EDUCATION CENTER	NE	40	+	+	+		+	+			
NEWTOWN STATE FISH FARM	C	18					+				
RUOFF FAMILY FARM	C	73	+	+	+		+		+		
SOIL CONSERVATION SERVICE FARM	C	100		+	+		+				

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Available · +

COUNTY	TYPE of AREA	ACREAGE or MILES	SHELTER	DRINKING WATER	SANITARY FACILITIES	PICNIC TABLES	PARKING	HIKING TRAILS	GUIDE SERVICE	CHARGE	CAMPING
HANCOCK											
CAMP BERRY	NE	309	+	+	+	+	+	+		+	+
FINDLAY RESERVOIRS AND WATER STUDIES LABORATORY	C	100		+			+				
VAN BUREN STATE PARK	NE	216	+	+	+	+	+	+			+
HARDIN											
MATSON NATURE STUDY & RECREATION AREA	NE	82	+	+	+	+	+	+			
SAULISBURY PARK	C-NE	199	+	+	+	+	+				
HARRISON											
BAKER RIDGE NATURAL AREA	NE	178		+	+	+	+				
BUCKEYE TRAIL	NE	25 miles									
CAMP TIPPECANOE	SC	1,100	+	+	+		+		+	+	+
CLENDENING LAKE	NE	6,400		+	+	+	+				+
FAITH RANCH	C-NE	1,250	+	+	+		+		+		
HARRISON STATE RECLAMATION AREA	C	1,321					+				
SALLY BUFFALO PARK	NE	408	+	+			+	+			
SNOW BOWL SKI AREA	NE	327	+	+	+	+	+	+			
TAPPAN LAKE	NE	7,140		+	+	+	+	+	+		+
HENRY											
DRY CREEK ACCESS	NE	2									
FLORIDA ACCESS	NE	4									
MAUMEE RIVER PARKWAY	U				+	+					
North Turkey Foot Area		486				+					
Missionary Island		296				+					
MAUMEE SHORES	NE	6				+	+	+			
HIGHLAND											
BARRETT'S MILLS	NE	80	+	+	+	+	+	+		+	
BUCKEYE TRAIL	NE	31 miles									
FALLSVILLE STATE WILDLIFE AREA	NE	1,211									
FORT HILL STATE MEMORIAL	NE	1,197	+	+	+	+	+				
OLDAKER STATE WILDLIFE AREA	NE	139					+	+		+	
PAINT CREEK STATE PARK	U	800					+				
ROCKY FORK STATE PARK	NE	3,464					+				
SEVEN CAVES	NE	100	+	+	+	+	+	+	+		+
HOCKING											
BUCKEYE TRAIL	NE	57 miles									
CAMP AKITA	SC	1,043	+	+	+	+	+			+	+
CAMP BECKONING TRAILS	NE	100		+	+		+				
CAMP ECHO HILLS	NE	500		+	+						
CAMP GREENHILLS	NE	1,200	+	+	+	+	+			+	+
CAMP KLAGES	NE	18		+	+		+				
CAMP OTTERBEIN	SC	426	+	+	+	+	+				
CAMP OTY'OKWA	SC	526	+	+	+		+				
CAMP WYANDOT	SC	450	+	+	+		+				
HOCKING HILL CAMP	NE	360	+	+	+	+	+			+	
HOCKING HILLS STATE PARK AND HOCKING STATE FOREST	NE	10,796		+	+		+				
Ash Cave	NE	80	+								
Centwell Cliffs	NE	60		+	+	+	+	+			
Cedar Falls	NE	40		+	+	+	+	+			
Conkle's Hollow	NE	120		+	+	+	+	+			
Old Man's Cave	NE	150		+	+	+	+	+			
Rock House	NE	160	+	+	+	+	+	+			
HOCKING VALLEY SCENIC RAILWAY		15	+								
HOLIDAY HAVEN	NE	480		+	+		+				
LAKE LOGAN STATE PARK	NE	715	+	+	+	+	+				
MODEL ENVIRONMENTAL STUDY CENTER	C-NE	600		+	+	+	+				
ROCK BRIDGE	NE	40					+				
ROLLING ACRES CAMPGROUND	NE	100	+	+	+		+				+
HOLMES											
CHERRY RIDGE FARM	C	135		+	+		+				
SPRING WALK FARM	C	283		+	+		+				
TROYER'S HOLLOW	NE	60	+	+	+		+		+		
VAN SICKLE WOODS	NP	30				+					
WHISPERING HILLS	NE	250	+	+	+	+	+				+

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COUNTY	TYPE of AREA	ACREAGE or MILES	SHELTER	DRINKING WATER	SANITARY FACILITIES	PICNIC TABLES	PARKING	HIKING TRAILS	GUIDE SERVICE	CHARGE	CAMPING
HURON											
BELLEVUE RESERVOIR	NE	8	+	+	+	+	+				
CAMP CONGER	SC	30	+	+	+	+	+	+		+	+
CAMP SINGING RIVER	NE	98	+	+	+	+	+	+		+	+
CAMP TODIMECA	NE	297	+	+	+		+	+			+
FRENCH PROPERTY	NE	493					+	+			
HOLTHOUSE CELERY FARM	C	150		+	+		+				
MUCK BRANCH OARDC	C	15					+				
WILLARD MARSH STATE WILDLIFE AREA	NE	2,676					+				
JACKSON											
BUCKEYE FURNACE	NE	270		+	+	+	+	+		+	
CAMP CANTER'S CAVE	SC	59	+	+	+	+	+	+		+	+
COOPER HOLLOW STATE WILDLIFE AREA	NE	4,140		+			+				
LEO PETROGLYPH STATE MEMORIAL	NE	12	+	+	+	+	+	+			
LIBERTY STATE WILDLIFE AREA	NE	145					+				
RICHLAND FURNACE STATE FOREST	U	2,343					+				
JEFFERSON											
AUSTIN LAKE	NE	1,700	+	+	+	+	+			+	+
BRUSH CREEK STATE WILDLIFE AREA	NE	2,550		+		+	+	+			
FERNWOOD STATE FOREST	C	2,107		+	+	+	+	+			+
FRIENDSHIP PARK	C	1,150		+	+	+	+				
G.K.L. WILDLIFE AREA	NE	500		+	+	+	+	+			
JEFFERSON LAKE STATE PARK	NE	933	+	+	+	+	+	+			+
KNOX											
BRINKHAVEN ACCESS	NE	38					+				
CAMP ANDERSON	NE	205	+	+	+	+	+	+		+	+
CAMP NELSON DODD	SC	1,100	+	+	+		+	+		+	+
DANVILLE CONSERVATION FARM	C	280	+	+	+	+	+	+			+
EDUCATIONAL PARK EXTENSION	NE	63						+			
KNOX WOODS STATE NATURE PRESERVE	NP	30					+				
KNOX LAKE STATE WILDLIFE AREA	NE	760		+	+	+	+				
LAKE											
BUCKEYE TRAIL	NE	33 miles									
CAMP LEJNAR	NE	432	+	+	+	+	+	+		+	+
CAMP STIGWANDISH	[illegible]	350	+	+	+		+	+		+	
CAMP RUTH WEIGAND	SC	297	+	+	+	+	+	+		+	+
CEDAR HILLS CAMP & CONFERENCE CENTER	NE	[illegible]0	+	+	+	+	+	+		+	+
HEADLANDS BEACH STATE PARK	NE	120		+	+	+	+				
HOLDEN ARBORETUM	NE	2,100	+	+	+	+	+	+	+		
HOLDEN NATURAL AREAS											
Bole Forest	NP	40						+			
Hanging Rock Farm	NP	400									
Little Mountain	NP	65						+			
KIMBALL WOODS	NP	100									
LAKE COUNTY METROPOLITAN PARK DISTRICT											
Chapin Forest Reservation	NE	362	+	+	+	+	+	+	+		
Girdled Road Reservation	U	745						+			
Grand River Reservation											
Helen Hazen Wyman Park	NE	60									
Hidden Valley Park	NE	110	+	+	+	+	+	+	+		
Hogback Ridge Park	NE	185		+	+	+	+	+	+		
Indian Point Park	NE	78			+	+	+	+	+		
Riverview Park	NE	45			+	+	+				
Lake Shore Reservation (Parmly Park)	U	15									
Paine Creek Reservation (Hell Hollow Park)	NE	709	+	+	+	+	+	+	+	+	
MENTOR MARSH STATE NATURE PRESERVE	NP	619					+	+			
RESOURCES CENTER	NP	28									
WICKLIFFE HIGH SCHOOL LAND LABORATORY	NE	90						+	+	+	
WILLOUGHBY-EASTLAKE LAND LABORATORY	NE	30					+				
LAWRENCE											
CLARK WOODS	NE	53					+	+			
DEAN STATE FOREST	NE	1,797				+	+	+			
LAKE VESUVIUS RECREATION AREA (Wayne National Forest)	NE	2,000	+	+	+	+	+	+		+	+

— CHART LEGEND —
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COUNTY	TYPE of AREA	ACREAGE or MILES	SHELTER	DRINKING WATER	SANITARY FACILITIES	PICNIC TABLES	PARKING	HIKING TRAILS	GUIDE SERVICE	CHARGE	CAMPING
— LICKING —											
BLACKHAND GORGE STATE NATURE PRESERVE		743									
BUCKEYE LAKE STATE PARK	NE	3,307	+	+	+	+	+	+		+	
CAMP AGAPE	SC	40	+	+	+	+	+	+		+	+
CAMP FALLING ROCK	NE	500		+	+	+	+	+			+
CAMP OHIO	SC	200	+	+	+		+	+		+	+
CAMP WAKATOMIKA	SC	256	+	+	+		+	+		+	+
CRANBERRY BOG STATE NATURE PRESERVE	NP	20									
DAWES ARBORETUM	NE	950	+	+	+	+	+	+	+	+	
DENISON UNIVERSITY BIOLOGICAL RESERVE	NP	350	+	+	+		+	+			
FLINT RIDGE STATE MEMORIAL	NE	515	+	+	+	+	+	+			
HEBRON NATIONAL FISH HATCHERY	C	217		+			+	+	+	+	
OCTAGON EARTHWORKS AND MOUND BUILDERS EARTHWORKS	NE	66	+	+	+	+	+				
PINE WOODS	NE	250				+	+	+			
PINECREST TREE FARMS	C-NE	200			+		+	+			
SOUTHWEST LICKING SCHOOL LAND LABORATORY	NE	50	+			+	+	+			
— LOGAN —											
CAMP MAC-O-CHEE	NE	413	+	+	+	+	+	+		+	+
CAMP MYEERAH	NE	480	+	+	+	+	+	+		+	+
CAMP (ALFRED J.) WILLSON	SC	460	+	+	+		+			+	+
INDIAN LAKE STATE PARK	NE	6,448	+	+	+	+	+				+
KIRKMONT CENTER	SC	353	+	+	+		+	+		+	+
MARMON VALLEY FARM	SC	200	+	+	+		+	+		+	+
ROLLICKING HILLS	SC	160	+	+	+						+
VALLEY HI SKI AREA	NE	350	+	+	+	+	+	+			
ZAKE CAVERNS	NE	87	+	+	+	+	+	+		+	+
— LORAIN —											
CAMP ISS-SEE-KES	SC	40	+	+	+	+	+	+			+
CHANCE CREEK	NP	88									
CLARE-MAR CAMP	NE	220	+	+	+	+	+				+
FINDLEY STATE PARK	NE	931		+	+	+	+	+	+		+
FIRELANDS RESERVATION	NE	300		+	+		+	+			+
LORAIN COUNTY METROPOLITAN PARKS											
Black River Reservation	NE	441	+	+	+	+	+	+			
Charlemont Reservation	U	462					+				
French Creek Reservation	U	345					+	+			
Indian Hollow Reservation (Sheldon Woods)	NE	178	+								
Lake Carlisle Reservation	NE	1,235	+	+	+	+	+	+			
Vermilion River Reservation (Mill Hollow-Bacon Woods Memorial Park)	NE	271	+	+	+	+	+	+	+		+
WELLINGTON RESERVOIRS	NE	400					+	+			
WELLINGTON STATE WILDLIFE AREA	NE	201					+				
— LUCAS —											
CRANE CREEK STATE PARK	NE	72		+	+	+	+	+	+		
CROSBY, GEORGE P., PARK & GARDENS	NE	50	+	+	+	+	+		+		
IRWIN PRAIRIE STATE NATURE PRESERVE		142									
MEDUSA PORTLAND CEMENT CO. QUARRY	NE	80							+		
METROPOLITAN PARKS OF THE TOLEDO AREA											
Bend View Met. Park	NE	30	+					+			
Canal Lands Met. Park	NE	110						+	+		
Farnsworth Met. Park	NE	40	+	+	+	+	+	+	+		
Oak Openings Met. Park	SC	3,400	+	+	+	+	+	+	+		
Pearson Met. Park	NE	320	+	+	+	+	+	+	+		
Providence Met. Park	NE	300	+	+	+	+	+	+	+		
Secor Met. Park & Arboretum	NE	500	+	+	+	+	+	+	+		+
Side Cut Met. Park	NE	120	+	+	+	+	+	+	+		
Swan Creek Met. Park	NE	412	+	+	+	+	+	+	+		
METZGER MARSH STATE WILDLIFE AREA	NE	558					+				
OTTAWA PARK	NE	300	+	+	+	+	+	+	+		
SCHWAMBERGER PRESERVE	NP	26									
TOLEDO ZOOLOGICAL GARDENS	C	43	+	+	+	+	+				
WOODLAWN CEMETERY	NE	160		+			+				
— MADISON —											
CAMP MADISON LAKE	NE	1¼		+				+			+
MADISON LAKE STATE PARK	NE	183	+	+	+	+	+				
PINE TREE TRAIL	NE	40	+	+	+	+	+	+			+
PROCTER CONFERENCE CENTER	SC	23	+	+	+	+	+			+	+
SHADY MEADOW FARM	C	70		+	+		+		+	+	

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— MAHONING											
BERLIN RESERVOIR STATE WILDLIFE AREA	NE	6,713		+	+	+	+				+
HOLY FAMILY SCHOOL LAND LABORATORY	NE	7	+	+	+	+	+				
LAKE MILTON RECREATION AREA	NE	4,400		+	+	+	+				
MAHONING COUNTY JOINT VOCATIONAL SCHOOL LAND LABORATORY	NE	158									
MILL CREEK PARK	NE	2,389	+	+	+	+	+	+	+		
MILLWOOD CAMP	NE	60	+	+	+		+	+		+	+
POLAND MUNICIPAL FOREST	NE	242	+			+	+	+			
— MARION											
BIG ISLAND STATE WILDLIFE AREA	NE	1,043					+				
OWENS BOY SCOUT CAMP	NE	55	+	+	+		+	+			+
— MEDINA											
HINCKLEY RESERVATION	NE	1,825	+	+	+	+	+	+	+		
MAPLE LAKES	NE	120	+	+	+	+	+	+		+	+
SPENCER LAKE STATE WILDLIFE AREA	NE	595					+				
WILDWOOD LAKES	NE	180	+	+	+	+	+	+		+	+
— MEIGS											
BELLEVILLE LOCKS AND DAM	C	186	+	+	+	+	+		+		
BUFFINGTON ISLAND PARK	NE	5		+	+	+	+				
CAMP KIASHUTA	SC	125	+	+	+	+	+	+		+	+
FORKED RUN STATE PARK	NE	794		+	+	+	+	+	+		+
SHADE RIVER STATE FOREST	U	2,490									
HIDDEN LAKES	NE	70		+	+	+	+	+		+	+
ROYAL OAK PARK	NE	130		+	+	+	+	+		+	
SOUTHEAST BRANCH, OARDC	C	330	+	+	+	+	+	+	+		
— MERCER											
GRAND LAKE ST. MARYS STATE PARK	NE	13,840	+	+	+	+	+		+		+
HARBOR POINT 4-H CAMP	NE	24			+		+				
MERCER COUNTY WATERFOWL RUFUGE	NE	1,000					+				
— MIAMI											
BUCKEYE TRAIL	NE	25 miles									
CAMP INDIAN HILLS	SC	52	+	+	+	+	+	+		+	+
PIQUA HISTORICAL AREA	NE	174		+	+	+	+	+		+	
PIQUA LIMESTONE QUARRY	C	1,000					+				
— MONROE											
MONROE LAKE STATE WILDLIFE AREA	NE	1,332		+	+	+	+	+			+
SUNFISH CREEK STATE FOREST	U	638									
— MONTGOMERY											
AULLWOOD AUDUBON CENTER	NE-C	70		+	+		+	+	+		
AULLWOOD AUDUBON FARM	C	120		+	+		+	+	+		
BUCKEYE TRAIL	NE	17 miles									
CENTERVILLE-WASHINGTON PARK DISTRICT											
Black Oak Park	NE	30			+	+	+	+			
Concept Park	NE	6		+							
Donneybrook Park	NE	4½									
Grant Park (Grant Life Science Center)	NE-SC	101		+			+	+	+		+
Iron Horse Park	NE-U	26									
Mead Park	U	12									
Oak Creek South Park	U	18									
Old Lane Park	NE	4½									
Pleasant Hill Park	NE	5			+	+	+				
Rahn Park	C	1¼									
Rosewood Park	C	12									
Sugar Valley Park	U	70									
Woodbourne Green	NE	½									
Yankee Park	NE	26		+			+	+			
DAYTON-MONTGOMERY COUNTY PARK DISTRICT											
Cox Arboretum	NE	184		+	+		+	+	+		
Dry Lick Run Reserve	NE	522		+	+	+	+	+			+
Englewood Reserve	NE	1,872	+	+	+	+	+	+			+
Germantown Reserve	NE	791	+	+	+	+	+	+	+		+
Possum Creek Reserve	NE	482		+	+	+	+	+			
Taylorsville Reserve	NE	325	+	+	+	+	+	+	+		

— CHART LEGEND —
Natural Environment · NE
School Camping · SC
Conservation Education · C
Undeveloped · U
Nature Preserve · NP
Available · +

COUNTY	TYPE of AREA	ACREAGE or MILES	SHELTER	DRINKING WATER	SANITARY FACILITIES	PICNIC TABLES	PARKING	HIKING TRAILS	GUIDE SERVICE	CHARGE	CAMPING
MONTGOMERY (Cont.)											
E.V. JOTTER LAND LABORATORY	NE	25					+	+			
MONTGOMERY COUNTY JOINT VOCATIONAL SCHOOL LAND LABORATORY	C	185		+	+		+	+			
NORTHMONT SCHOOL LAND LABORATORY	NE	15					+	+			
MORGAN											
BUCKEYE TRAIL	NE	48 miles		+	+	+	+	+	+	+	+
BURR OAK STATE PARK	NE	3,253		+	+	+	+	+			+
CAMP DOUDA DALE	NE	500		+	+	+	+	+	+		+
MUSKINGUM RIVER PARKWAY STATE PARK	NE	27		+	+	+	+				
OHIO POWER RECREATION AREA (CUMBERLAND MINE AREA)	NE-C	100,000		+	+						
WOLF CREEK STATE WILDLIFE AREA	NE	3,800		+	+						
MORROW											
CAMP BROAD ACRES	NE	600	+	+	+	+	+	+		+	+
DOGWOOD VALLEY CAMP	NE	85	+	+	+	+	+	+			+
LUTHERAN MEMORIAL BIBLE CAMP	SC	114		+	+	+	+	+	+		+
MT. GILEAD STATE PARK	NE	172	+	+	+	+	+	+			+
MUSKINGUM											
BAUGHMAN PARK	NE	65		+	+	+	+	+			+
BLUE ROCK STATE PARK AND STATE FOREST	NE	4,910	+	+	+	+	+	+	+		+
DILLON STATE PARK & RESERVOIR AREA	NE	6,675	+	+	+	+	+	+	+		
DONAHOE TREE FARM	C	260		+		+	+	+	+	+	+
MUSKINGUM RIVER PARKWAY STATE PARK	NE	33			+	+	+	+			
OHIO POWER RECREATION AREA (CUMBERLAND MINE AREA)	NE-C	100,000	+	+		+	+	+	+		
POWELSON STATE WILDLIFE AREA	NE	2,896			+	+	+	+		+	+
TILTING ACRES CAMP	NE	105	+	+	+	+	+	+			
WILDWOOD	NE	200	+	+	+		+	+			
ZANESVILLE STATE NURSERY	C	206				+	+	+			
ZANE TRACE SCHOOL FOREST	NE	48									
NOBLE											
BUCKEYE TRAIL	NE	29 miles			+	+	+	+	+		+
EASTERN OHIO RESOURCE DEVELOPMENT CENTER	C	2,000			+	+	+	+	+		+
FRONTIER VACATION LAND	C	1,000	+		+	+	+	+	+		+
OHIO POWER RECREATION AREA (CUMBERLAND MINE AREA)	NE-C	100,000			+	+	+	+	+		+
PINE LAKE CONSERVATIVE BAPTIST CAMP	NE	78			+	+	+	+	+	+	
SENECAVILLE LAKE	NE	7,160	+		+	+	+	+			
WOLF RUN STATE PARK	NE	1,268									
OTTAWA											
CAMP PLYMOUTH SHORE	NE	5	+		+	+	+	+	+		+
CAMP SABROSKE	SC	110	+		+	+	+	+			
CAMP YUKITA	NE	35	+		+	+	+	+			
CATAWBA ISLAND STATE PARK	NE	10									
CRYSTAL CAVE	NE	1									
EAST HARBOR STATE PARK	NE	1,613	+		+	+	+	+	+		+
LAKESIDE	SC	10	+		+	+		+			
LITTLE PORTAGE STATE WILDLIFE AREA	NE	357			+	+		+	+		
MAGEE MARSH STATE WILDLIFE AREA AND CRANE CREEK WILDLIFE EXPERIMENT STATION	NE	2,600						+	+		
OTTAWA, CEDAR POINT AND WEST SISTER ISLAND NATIONAL WILDLIFE REFUGES	NE	8,000			+	+		+			+
PERRY'S CAVE	NE	10									
SOUTH BASS ISLAND STATE PARK	NE	32	+		+	+		+			
STONE LABORATORY	NE	10				+					
TOUSSAINT STATE WILDLIFE AREA	NE	236									
PAULDING											
PAULDING PONDS	NE	51		+	+						
PERRY											
CLOUSE LAKE STATE WILDLIFE AREA	NE	90			+	+	+	+	+		
FORT GLENFORD	NP	95			+	+					
PERRY RECLAMATION AREA	C	4,400									

— CHART LEGEND —
Natural Environment - NE
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Undeveloped - U
Nature Preserve - NP
Available - +

COUNTY	TYPE of AREA	ACREAGE or MILES	SHELTER	DRINKING WATER	SANITARY FACILITIES	PICNIC TABLES	PARKING	HIKING TRAILS	GUIDE SERVICE	CHARGE	CAMPING
— PICKAWAY —											
CIRCLEVILLE CANAL	NE	35					+				
DEER CREEK STATE PARK	NE	9,307		+	+	+	+		+		+
MARION, A.W., STATE PARK	NE	412		+	+	+	+	+			+
STAGE'S POND STATE NATURE PRESERVE	NP	123									
— PIKE —											
BUCKEYE TRAIL	NE	43 miles									
CAVE LAKE PARK	NE	300	+	+	+	+	+	+			+
KINCAID SPRINGS STATE FISH HATCHERY	C	213		+	+			+			
LAKE WHITE STATE PARK	NE	320	+	+	+	+	+				+
OVERLOOK HILLS FARM	C-NE	650		+	+	+	+	+	+		
PIKE LAKE STATE PARK AND PIKE STATE FOREST	NE	11,086		+	+	+	+	+	+		+
— PORTAGE —											
ARSENAL LAND NATURE PRESERVE	NP	280									
BEVERLY WOODS	NP	42									
BUCKEYE TRAIL	NE	38.6 miles									
CAMP ASBURY	SC	305	+	+	+	+	+	+			
CAMP CARL	SC	240	+	+	+	+	+	+		+	+
CAMP HI	SC	53	+	+	+	+	+	+			+
CENTERVILLE MILLS YMCA CAMP	SC	300	+	+	+	+	+	+			
EAGLE CREEK STATE NATURE PRESERVE	NP	327									
GARRETTSVILLE OUTDOOR AREA	NE	7		+	+		+	+			
JENNINGS WOODS	NP	72									
NELSON-KENNEDY LEDGES STATE PARK	NE	167		+	+	+	+	+			
TINKERS CREEK STATE PARK	NE	1,086									
TINKERS CREEK STATE NATURE PRESERVE	NP	786		+	+	+	+	+			
WEST BRANCH STATE PARK	NE	8,200	+	+	+	+	+	+	+		+
— PREBLE —											
CAMP MYRON KAHN	SC	86	+	+	+	+	+	+		+	+
FORT ST. CLAIR STATE MEMORIAL	NE	80	+	+	+	+	+	+			
IMES PARK	NE	78	+	+	+	+	+	+		+	+
RUSH RUN STATE WILDLIFE AREA	NE	1,183		+	+		+	+			
WOODLAND TRAILS SCOUT RESERVATION	NE	2,000	+	+	+	+	+	+			+
— PUTNAM —											
CASCADE STATE ROADSIDE PARK	NE	3	+	+	+	+	+	+			
KALIDA FISH & GAME FARM	C	40	+	+	+	+	+	+	+		
LEIPSIC HUNTING & FISHING RESERVE	NE	80	+	+	+	+	+	+			
LEIPSIC RESERVOIR	NE	40	+		+	+	+	+			
OTTOVILLE QUARRIES	NE	6					+				
— RICHLAND —											
CAMP AVERY HAND	SC	217	+	+	+	+	+	+			+
CAMP MOWANA	NE	182	+	+	+	+	+	+			+
CAMP TEMPLED HILLS	SC	218	+	+	+	+	+	+			+
CLEARFORK RESERVOIR	NE	2,000			+		+				
FOWLER WOODS STATE NATURE PRESERVE	NP	134		+	+	+	+	+	+		
GRACE HAVEN WILDLIFE LABORATORY	NE	18		+	+		+	+			
HEMLOCK FALLS	NE	102					+	+			
HIDDEN HOLLOW CAMP	SC	492	+	+	+		+	+		+	+
KINGWOOD CENTER	C	47		+	+		+	+			
MALABAR FARM STATE PARK	C	715		+	+	+	+	+			
MANSFIELD SEWAGE PLANT	C	30			+		+				
MANSFIELD WEATHER STATION	C				+		+				
RICHLAND RURAL LIFE CENTER	SC	80	+	+	+	+	+	+		+	+
SHELBY MUNICIPAL WATER WORKS	C	3					+				
WILLOW VALLEY FARM	C	150	+	+	+		+				
WOOSTER PRESBYTERY CAMP	SC	270	+	+	+	+	+	+		+	+
— ROSS —											
ADENA STATE MEMORIAL	NE	300			+		+	+	+	+	
BUCKEYE TRAIL	NE	25 miles									
CAMP VALLEY VISTA	SC	22		+	+		+	+			+
CHILLICOTHE SCHOOLS LAND LABORATORY	NE	24					+				
DAUGHTERS CONSERVATION AND WILDLIFE AREA	NE	87		+	+	+	+	+		+	+
MOUND CITY GROUP NATIONAL MONUMENT	NE	68		+	+	+	+	+	+		
PLEASANT VALLEY STATE WILDLIFE AREA	NE	1,414					+				
ROSS LAKE STATE WILDLIFE AREA	NE	1,110		+	+		+				
SCIOTO TRAIL STATE PARK AND STATE FOREST	NE	9,399	+	+	+	+	+	+			
TAR HOLLOW STATE PARK AND STATE FOREST	NE	16,668	+	+	+	+	+	+			+

– CHART LEGEND –
Natural Environment - NE
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COUNTY	TYPE of AREA	ACREAGE or MILES	SHELTER	DRINKING WATER	SANITARY FACILITIES	PICNIC TABLES	PARKING	HIKING TRAILS	GUIDE SERVICE	CHARGE	CAMPING
SANDUSKY											
ALDRICH POND STATE WILDLIFE AREA	NE	40					+				
GREEN SPRINGS STATE NURSERY	C	120		+	+		+				
HAYES STATE MEMORIAL	NE	25		+	+		+				
MILLER BLUE HOLE	NE	13									
SCIOTO											
CAMP MOLLY LAUMAN	NE	100	+	+	+	+	+	+			+
MEAD EXPERIMENTAL FOREST	NE	700			+		+				
SHAWNEE ENVIRONMENTAL RESOURCE CENTER	NE	10	+	+	+		+				
SHAWNEE STATE FOREST AND STATE PARK	NE	58,165	+	+	+	+	+	+	+		+
SENECA											
CAMP GLEN	NE	107		+	+	+	+	+		+	+
CAMP HERTZER	NE	41	+	+	+	+	+				+
CAMP PITTENGER	NE	30	+	+	+	+	+	+			+
CAMP SENECA	NE	215		+	+	+	+	+			+
KNOBLAUGH WILDLIFE SANCTUARY	C	5	+	+	+	+	+		+		
PLEASANT VALLEY GIRL SCOUT CAMP	SC	98	+	+	+	+	+			+	+
SENECA CAVERNS	NE	2		+	+	+	+		+	+	
WICKWIRE SHADE NATURE PRESERVE		40									
SHELBY											
LAKE LORAMIE STATE PARK	NE	2,005	+	+	+	+	+		+		+
LEIGHTY LAKE	NE	12					+				
LOCKINGTON LOCKS	NE	45					+	+			
SIDNEY SCHOOLS LAND LABORATORY	NE	13					+	+			
STARK											
BOLIVAR RESERVOIR	NE	870		+	+	+	+				
BUCKEYE TRAIL	NE	32 miles									
CAMP WANAKE	SC	200	+	+	+	+	+	+			+
CANTON PARK SYSTEM		663									
Monument Park	NE	16	+	+		+	+				
Nimisilla Park	NE	23	+	+	+	+	+				
Sturum Park	NE	88	+	+	+	+	+	+			
LAKE PARK STATE WILDLIFE AREA	NE	93		+	+	+	+				+
MARLINGTON SCHOOL LAND LABORATORY	NE	100		+	+		+	+			
STARK WILDERNESS CENTER	NE	409	+	+	+	+	+	+	+		
SUMMIT											
ADELL DURBAN PARK AND ARBORETUM	NE	36	+	+	+	+	+	+			
AKRON STATE FISH FARM	C	26		+			+	+			
AKRON METROPOLITAN PARKS		6,867									
Deep Lock Quarry Met. Park	NE	191		+	+	+	+	+			
F.A. Seiberling Nature Center	NE	100		+	+		+	+			
Firestone Met. Park	NE	250	+	+	+	+	+	+			
Furnace Run Met. Park	NE	889	+	+	+	+	+	+			
Goodyear Heights Met. Park	NE	411	+	+	+	+	+	+			
Gorge Met. Park	NE	204	+	+	+	+	+	+			
Hampton Hills Met. Park	NE	278			+	+	+	+			
O'Neil Woods Met. Park	NE	242			+	+	+	+			
Sand Run Met. Park	NE	1,040	+	+	+	+	+	+			
Silver Creek Met. Park	NE	486			+			+			
Virginia Kendall Met. Park	NE	2,039	+	+	+	+	+	+			
BRANDYWINE SKI & RECREATION CENTER	NE	240	+	+	+	+	+	+			
BUCKEYE TRAIL	NE	38 miles									
CAMP JULIA CROWELL AND CAMP HILAKA	SC	345	+	+	+	+	+	+		+	+
CAMP MARGARET BATES	SC	125	+	+	+	+	+	+		+	+
CYO CAMP CHRISTOPHER	SC	160	+	+	+	+	+	+			+
HALE FARM AND VILLAGE	H-NE	170	+	+	+	+	+	+	+	+	
NIMISILA RESERVOIR	NE	1,225		+	+		+				
PORTAGE LAKES STATE PARK	NE	2,435	+	+	+	+	+				
REVERE SCHOOL LAND LABORATORY	NE	6		+			+	+			
STUMPY BASIN	NP	250									
TAMSIN PARK	NE	100	+	+	+	+	+	+			+
TWINSBURG LAND LABORATORY	NE	17				+	+				

– CHART LEGEND –
Natural Environment · NE
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Nature Preserve · NP
Available · +

COUNTY	TYPE OF AREA	ACREAGE or MILES	SHELTER	DRINKING WATER	SANITARY FACILITIES	PICNIC TABLES	PARKING	HIKING TRAILS	GUIDE SERVICE	CHARGE	CAMPING
TRUMBULL											
ANDERSON PARK	NE	10	+	+	+	+	+				
CAMP SUGARBUSH	SC	190	+	+	+	+	+	+			+
GRAND RIVER STATE WILDLIFE AREA	NE	5,187		+			+	+			
HIGHLANDS CAMP	NE	365	+	+	+	+	+	+		+	+
MOSQUITO STATE PARK AND MOSQUITO CREEK RESERVOIR STATE WILDLIFE AREA	NE	11,857		+	+	+	+				+
SCIENCE AREA AT MINES	NE	55					+	+			
TRUMBULL ARBORETUM	NE	120					+				
WARREN SCHOOLS LAND LABORATORY	NE	78		+			+	+			
TUSCARAWAS											
BEACH CITY RESERVOIR	NE	1,350		+	+	+	+				
BUCKEYE TRAIL	NE	16 miles									
CAMP ZIMMERMAN	SC	300	+	+	+	+	+	+			+
DEVIL'S DEN PARK	NE	275	+	+	+	+	+	+			+
DOVER RESERVOIR	NE	490		+	+						
FORT LAURENS STATE MEMORIAL	NE	81	+	+	+	+	+			+	
SCHOENBRUNN VILLAGE STATE MEMORIAL	NE	171	+	+	+	+	+			+	
SNYDER CONSERVATION FARM	C	387		+			+				
ZOAR LAKE STATE WILDLIFE AREA	C	43					+				
UNION											
AMERICAN LEGION MEMORIAL PARK	NE	27	+	+	+	+	+	+			
CAMP RADAWOOD	NE	15		+	+		+	+			+
RICHWOOD LAKE PARK	NE	25	+	+	+	+	+	+			
TRANSPORTATION RESEARCH CENTER	C-NE	8,300									
VAN WERT											
HIESTAND WOODS PARK	NE	20	+	+	+	+	+	+			
VINTON											
BUCKEYE TRAIL	NE	12 miles									
COMMUNITY CAMP	NE	1,500	+	+	+	+	+	+	+	+	+
LAKE ALMA STATE PARK	NE	231	+	+	+	+	+				+
LAKE HOPE ENVIRONMENTAL RESOURCE CENTER		7									
LAKE HOPE STATE PARK AND ZALESKI STATE FOREST		28,837	+	+	+	+	+	+	+		+
VINTON COUNTY EPISCOPAL CAMP	NE	565	+	+	+	+	+	+			+
VINTON FURNACE EXPERIMENTAL FOREST	NE	1,200			+		+				
WARREN											
BART'S WILDLIFE RECREATION CAMPGROUND	NE	19	+	+	+	+	+	+	+		+
BUCKEYE TRAIL	NE	19 miles									
CAESAR CREEK GORGE STATE NATURE PRESERVE	NP	463									
CAESAR CREEK STATE PARK	U										
CAMP GRAHAM	SC	70	+	+	+	+	+	+			+
CAMP JOY EDUCATION CENTER	NE	315	+	+	+	+	+	+	+	+	+
CAMP KERN	SC	410	+	+	+	+	+	+	+	+	+
CAMP SWONEKY	NE	180	+				+	+			
CAMP WY-CA-KEY	SC	125	+				+				
FORT ANCIENT CANOE TRAILS	NE	111	+	+	+	+	+	+	+	+	+
FORT ANCIENT STATE MEMORIAL	NE	696	+	+	+	+	+	+		+	
HOB CAMP NATURE CENTER	NE	110				+	+	+			
WHIP-POOR-WILL HILLS	NE	492	+	+	+	+		+		+	+
WASHINGTON											
CAMP FALL RUN	NE	205	+	+	+	+	+	+		+	
CAMP HERVIDA	SC	86	+		+	+	+	+		+	+
FALLS RUN TRAIL	NP	30									
FORT FRYE FFA ENVIRONMENTAL CENTER	NE	40	+				+				
MARIETTA STATE NURSERY	C	95		+	+		+				
MUSKINGUM RIVER PARKWAY STATE PARK	NE	120		+		+	+				
NATURAL BRIDGE	NP	80									
SAIDA	NE	375		+	+	+	+	+			
VETO LAKE STATE WILDLIFE AREA	NE	448		+	+	+	+				

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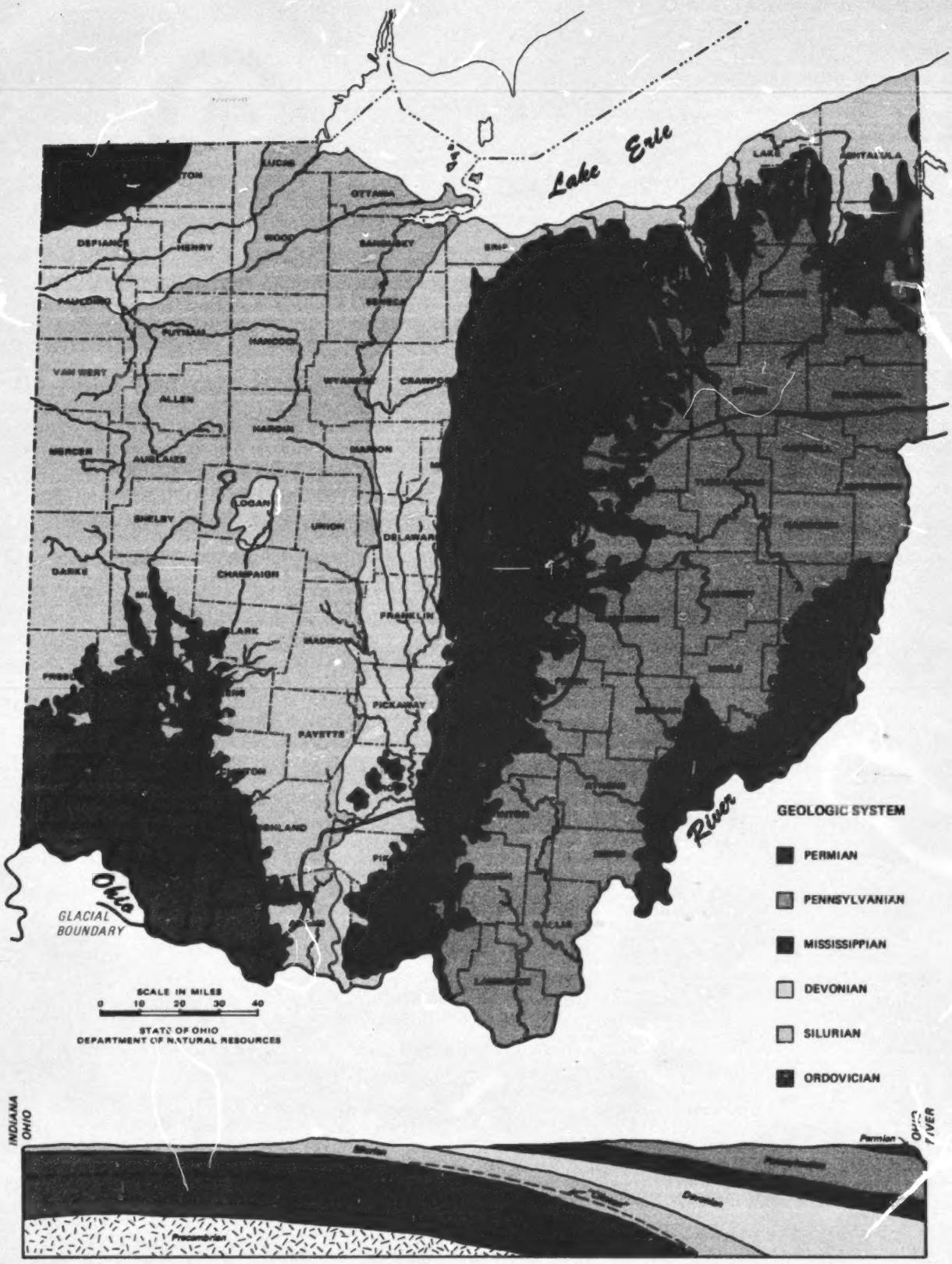
— WAYNE											
BROWN'S LAKE BOG	NP	80					+	+			
DAVEY TREE NURSERY	C	220	+	+			+				
DILLER, O.D., SCHOOL ARBORETUM	C	1		+	+		+				
DUSH'S CHRISTMAS TREE FARM	C	50					+				
INSPIRATION HILLS	NE	212	+	+	+		+	+		+	+
KILLBUCK STATE WILDLIFE AREA	NE	1,894	To be developed								
MEMORIAL FOREST	NE	124	+	+	+	+	+	+			
MILLBROOK MILL	NE	1									
MYERS-SWINEHART FARM	C	218					+				
OHIO AGRICULTURAL RESEARCH AND DEVELOPMENT CENTER	C	1,953		+	+	+	+				
PEE WEE HOLLOW WILDERNESS AREA	NP	190	+	+			+	+			
SECREST ARBORETUM	NE	115		+	+	+	+	+			
SHREVE LAKE STATE WILDLIFE AREA	NE	170		+	+	+	+				
SPANGLER PARK	NE	250			+	+	+	+			
WAYNE COUNTY SADDLE CLUB	NE	50	+	+	+	+	+	+			
WEYGANDT WOODS	NE	44					+	+			
— WILLIAMS											
BEAVER CREEK STATE WILDLIFE AREA	NE	153					+				
BRYAN HIGH SCHOOL OUTDOOR LABORATORY	NE	4									
DREAMLAND ACRES	NE	550	+		+	+	+	+	+		
GEORGE BIBLE PARK	NE	80	+	+	+	+	+	+			
HICKORY VALLEY CAMP	NE	40		+	+	+	+	+			+
OPDYCKE WOODS	NP	45				+	+				
WILLIAMS COUNTY CONSERVATION AREA	NE	74	+	+	+	+	+	+			
— WOOD											
BOWLING GREEN SENIOR HIGH SCHOOL LAND LABORATORY	NE	2					+				
LAKOTA SCHOOL LAND LABORATORY	NE	½		+	+		+				
MARY JANE THURSTON STATE PARK	NE	105	+	+	+	+	+				
OTSEGO PARK	NE	50	+	+	+	+	+				
PERRYSBURG PARKS											
Orleans Park	NE	31				+	+	+			
Three Meadows Park	NE-C	19	+	+	+	+	+	+			
PUGH QUARRY	NE-C	40					+				
ROCK CIRCUS	NE	200		+	+	+	+	+			+
STEIDTMANN WILDLIFE SANCTUARY	NP	65	+				+				
— WYANDOT											
INDIAN MILL STATE MEMORIAL	NE	2		+	+	+	+			+	
KILLDEER PLAINS STATE WILDLIFE AREA	NE	8,100		+			+				
WYANDOT STATE WILDLIFE AREA	NE	341		+			+				

MAPS WITH DESCRIPTIVE INFORMATION



GEOLOGIC MAP AND CROSS SECTION OF OHIO

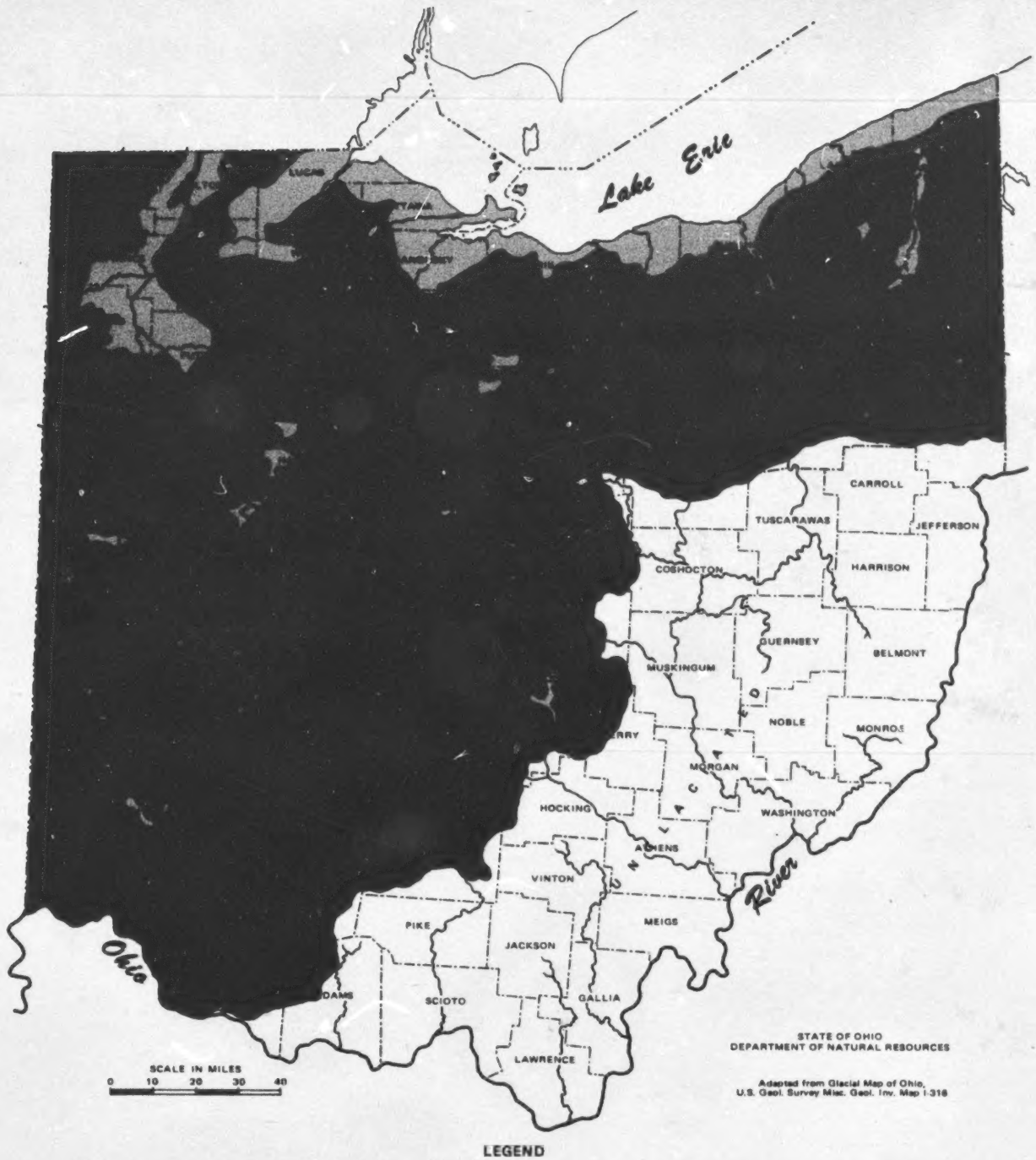
geology of ohio

The distribution of the various rock systems as shown on the geologic map is the result of the sum total of geologic history in the area we now call Ohio. The rock units themselves were formed millions of years ago when Ohio was covered at different times by vast seas, shallow lakes, swamps, or great deltas. Sediments deposited in each of these ancient environments subsequently became rocks. These rocks were to be subjected to millions of years of erosion and to changes caused by crustal instability. The cross section at the bottom of the geologic map gives some insight into crustal changes. It will be noted that the rock systems get deeper or dip below the surface of the state from west to east. This dip is caused in part by the bending and flexing of the earth's crust throughout geologic time. Erosion by ice and water has also played a significant role in Ohio's geologic history. Rocks have varying resistance to erosion depending upon their type. Sandstone, for instance, is relatively resistant, whereas shale is relatively weak. Specific environmental conditions vary the erosion rates for all rocks.

All rocks exposed at the surface in Ohio are of sedimentary origin; they all were formed in the Paleozoic Era and range in age from the Ordovician Period (430 to 500 million years before the present) to the Permian Period (225 to 280 million years before the present). Older units (from about 570 million years before the present)—including both igneous (fire-formed) and metamorphic (changed by heat and/or pressure) rocks—are present below the surface of the state at depths of from about 2,000 to 12,500 feet below sea level. In the western and northern portions of the state the bedrock is covered by glacial materials deposited during the Pleistocene Epoch (11,000 to 2 million years before the present), the youngest of several epochs of the Cenozoic Era. No rock units belonging to the other epochs of this era or to the Mesozoic Era are found in Ohio.

The following breakdown is generalized, but will serve as an informal guide to the predominant types of rocks found in each geologic system:

Ordovician—limestone, shale
Silurian—limestone, dolomite, salt, anhydrite, gypsum
Devonian—limestone, dolomite, shale
Mississippian—sandstone, shale
Pennsylvanian—sandstone, shale, limestone, clay, coal
Permian—essentially the same as the Pennsylvanian



LEGEND

WISCONSINAN

- KAMES and ESKERS
- LAKE DEPOSITS
- GROUND MORAINE
- END MORAINE

ILLINOIAN

- UNDIFFERENTIATED

KANSAN

- GROUND MORAINE

GLACIAL DEPOSITS OF OHIO

glacial deposits of ohio

It is difficult today to conceive of Ohio as having once had almost three-quarters of its surface area covered by vast sheets of glacial ice estimated to have been as great as one mile thick. The state has, in fact, been partially covered by ice at least three and possibly four times.

Evidence in the geologic record suggests that periods of extensive glaciation extend far into the world's geologic past. The most recent period of glaciation and one which is evident in Ohio is known geologically as the Pleistocene Epoch (11,000 to 2,000,000 years before present). This period of geologic history is also frequently referred to as the Ice Age, although, of course, there were certainly other "ice ages" in the past.

During the Pleistocene, four major ice advances are known to have occurred on the North American continent. These advances, named Nebraskan, Kansan, Illinoian, and Wisconsinan, from oldest to youngest, came from northern Canada and resulted from weather conditions which allowed for massive buildups of ice.

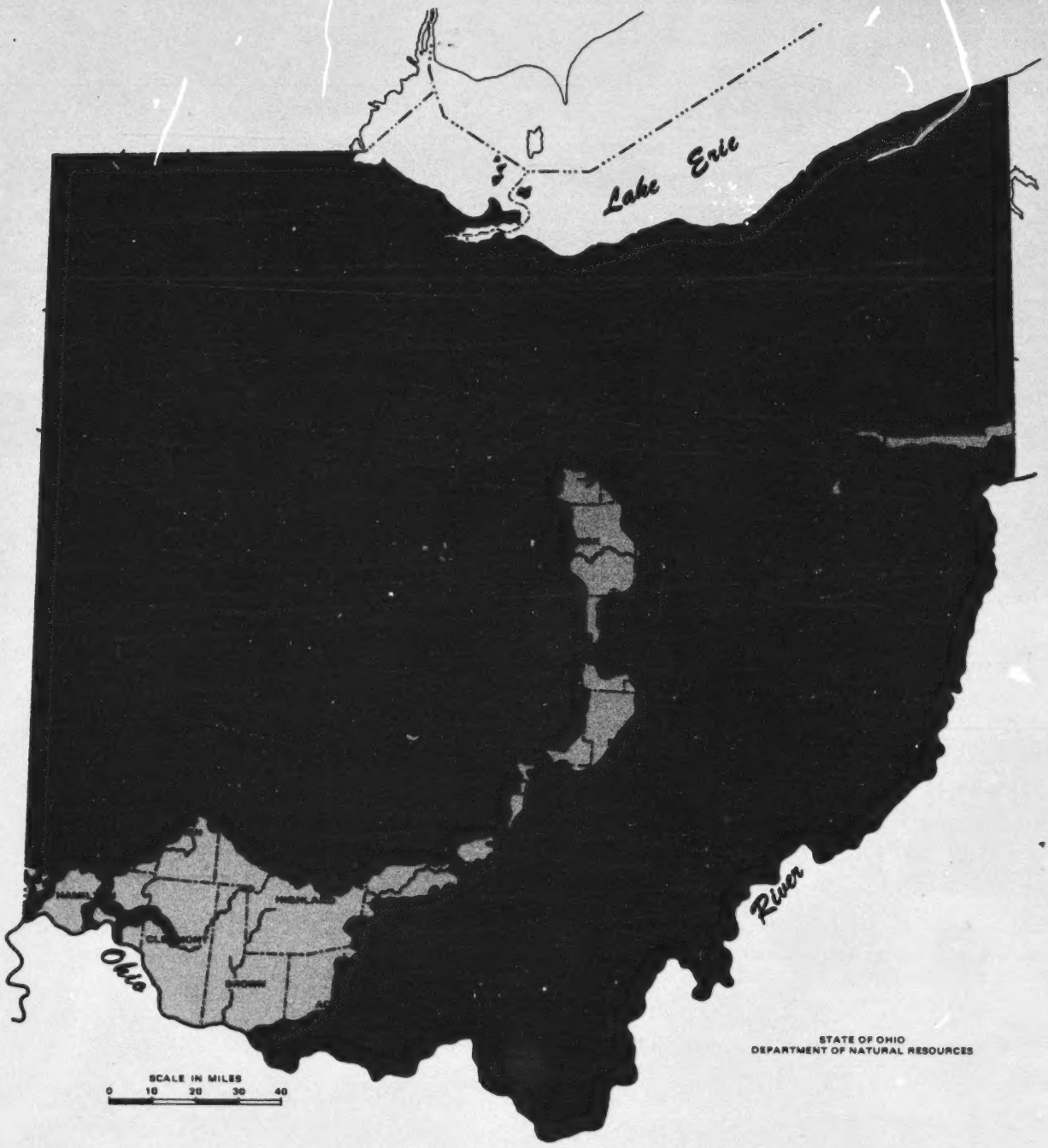
There is no direct evidence that the first ice sheet, the Nebraskan, occupied Ohio. In the Cincinnati region there is one small area of glacial deposits considered to be of Kansan age. The Illinoian ice sheet covered the largest area of Ohio, and its deposits are found from Cincinnati to Youngstown. Because each major advance covered the deposits left by the previous ice sheets, the materials left by the glaciers of the last major advance are the most obvious and easiest to study. The Wisconsinan was the last advance in Ohio, and the features shown on the glacial map are largely the result of Wisconsinan-age glaciers.

Moving down from Canada, the invading ice carried many types of rocks not found in Ohio. These rocks as well as those moved from one part of Ohio to another by the glacier, when found as boulders or larger, are called *erratics*.

The material left by the ice sheets consists of mixtures of clay, boulders, sand, and gravel left in various types of deposits relating to their mode of origin.

Rock debris carried along by a glacier was deposited in two principal fashions. Some material reaching the ice front was carried off by streams of meltwater to form outwash deposits. These deposits normally consist of sand and gravel. Sand and gravel deposits called *kames* and *eskers* formed on and under the surface of the glacier itself and are recognized by their characteristic shapes and composition. The distinctive characteristic of glacial debris that has been moved by water is that it was sorted by the water which carried it off. The larger boulder-size particles were left behind while the smaller clay-size particles were carried far away, leaving the intermediate gravel- and sand-size materials along the stream courses.

Boulder- to clay-size material deposited directly from the ice was not sorted. Some of the debris was deposited as ridges parallel to the edge of the glacier itself, forming terminal or end moraine. When the entire ice sheet receded because of melting, much of the ground-up rock still in the ice was deposited on the ground as ground moraine. The term *glacial drift* is commonly used to refer to any material deposited at or behind the terminal edge of a glacier.



LEGEND

- SOILS in HIGH LIME GLACIAL LAKE SEDIMENTS
- SOILS in LOW LIME GLACIAL LAKE SEDIMENTS
- SOILS in HIGH LIME GLACIAL DRIFT of WISCONSINAN AGE
- SOILS in LOW LIME GLACIAL DRIFT of WISCONSINAN AGE
- SOILS in GLACIAL DRIFT of ILLINOIAN AGE
- SOILS in SANDSTONE and SHALE
- SOILS in LIMESTONE and SHALE

OHIO'S SOIL REGIONS

ohio's soil regions

The soils in Ohio are a result of the action of natural forces and living organisms acting on rock and mineral material exposed at the surface of the earth over a period of time. These factors were not uniform throughout the state. As a result, over 500 different soils are recognized in Ohio. These soils can be grouped into seven major soil regions mainly on the basis of the kinds of rocks and mineral material and the length of time that this material was exposed at the surface of the earth.

SOILS IN HIGH LIME GLACIAL LAKE SEDIMENTS

The soils in northwestern Ohio, as shown on the map, formed in lake sediments or glacial till high in lime. These soils have high natural fertility except in the sand barrens and contain varying amounts of organic matter. Drainage is complicated by the fact that the land is level or gently sloping. The soils are used primarily for production of agricultural crops, including corn, soybeans, wheat, and alfalfa. Tomatoes and sugar beets are also important special crops in this region.

SOILS IN HIGH LIME GLACIAL DRIFT OF WISCONSINAN AGE

The soils in a large portion of western Ohio formed in glacial drift which was derived mainly from limestone and dolomite. The soils are moderate to high in natural fertility and contain varying amounts of organic matter. Corn, soybeans, wheat, oats, and hay crops are commonly grown in the region under a mixed livestock and grain system of farming. Areas adjacent to large metropolitan centers, such as Dayton, are rapidly changing from agricultural to residential and industrial uses.

SOILS IN GLACIAL DRIFT OF ILLINOIAN AGE

In the extreme southwest portion of the state and northward along the edge of the Wisconsinan glacial boundary, the soils formed in glacial drift which was derived from limestone, sandstone, or shale. These soils are older, commonly deeply leached, strongly acid, and moderately low in fertility. Cash grain and general farming are the primary types of agriculture. More steeply sloping areas are in woodland or pasture. Areas adjacent to large metropolitan centers, such as Cincinnati, are rapidly undergoing urban and industrial development.

SOILS IN LOW LIME GLACIAL LAKE SEDIMENTS

A narrow strip of land along eastern Lake Erie contains soils formed on lake sediments or glacial till deposits which were derived mainly from sandstone and shale. Some areas formed mainly in shale. These soils are generally low in fertility and organic matter and are acid. Much of this region is semiurban and is being diverted to housing, industry, and related uses. Due to the moderating influence of Lake Erie, truck gardening is common.

SOILS IN LOW LIME GLACIAL DRIFT OF WISCONSINAN AGE

The soils in this region formed in glacial drift of Wisconsinan age which was derived mainly from sandstone, shale, and low amounts of limestone. They are generally low in fertility and organic matter and are acid. General farming and dairying are the principal types of agriculture. Many areas adjacent to the large metropolitan centers, such as Akron, Cleveland, and Youngstown, are no longer cultivated and are awaiting development or have been developed.

SOILS IN SANDSTONE AND SHALE

Beyond the line of glaciation, the soils in this region formed mainly over acid sandstone and shale, although some soils formed over limestone or limy shale. The soils are often moderately deep, low in natural fertility and organic matter and are acid. Much of the land is too steep or shallow for cultivation; therefore, a relatively high proportion of the land is in forest or pasture. General farm crops are grown on the more gentle slopes. Strip mining, which is common in some areas, contributes sediment and toxic acid to many streams.

SOILS IN LIMESTONE AND SHALE

A small land area in southwestern Ohio contains soils formed mainly in limestone, interstratified limy shale, and limestone. Much of this region is hilly and made up of narrow ridges and steep slopes bordering narrow valleys. The fertility of these soils ranges from high to low. Much of the region is in pasture or woodland. Tobacco is an important crop on the less sloping areas.

YIELDS FROM INDIVIDUAL DRILLED WELLS
GALLONS PER MINUTE

- over 500
- 100 to 500
- 25 to 100
- 5 to 25
- under 5

GROUNDWATER RESOURCES OF OHIO

GROUNDWATER RESOURCES of OHIO

Groundwater (or underground water) is water that is contained within the earth's materials. It is present in the pore spaces of sandstones, in joints and fractures of limestones, and between the grains in sand and gravel deposits. It is the water that supplies all wells and springs and keeps our streams and rivers flowing during dry periods.

Over two million home owners in Ohio depend upon individual, private water wells. Seventy-eight percent of Ohio's municipal water supplies are served by wells, with the city of Dayton being one of the largest groundwater users in the nation. Some of Ohio's largest industries are dependent upon groundwater for manufacturing processes which require cold water of uniform temperature and chemical quality attainable only from underground sources. On an average day, more than 40 new water wells are drilled in Ohio. Groundwater is indeed an important natural resource.

The ultimate source of groundwater is precipitation. Part of the rain that falls on the earth's surface seeps downward through the soil into porous rock formations, where it is temporarily stored beneath the water table. In a manner similar to that of surface water, groundwater reacts to the force of gravity and moves downgradient toward areas of discharge, but at an exceedingly slow rate usually measured in feet per day. A well withdrawing water from the ground short-circuits the natural cycle, leaving a void which is again replenished. In a humid climate such as exists in Ohio, the rate at which the saturated materials can be replenished is sufficient to support sizable withdrawals without a net lowering of the water table.

The amount of water that a given rock formation can contain depends on the permeability and porosity of the rocks. Porosity refers to the spaces between the grains or cracks that can fill with water. If the grains are all about the same size, the spaces between them account for a large part of the whole volume. This is true of gravel and sand. However, if the grains are not all of the same size the spaces between the larger grains will fill with small grains instead of water. If water is to move through the rock, the pores must be connected to one another. If the rock has a great many connected pore spaces so that water can move freely through them, we say that the rock is permeable. Large amounts of water are available from saturated, permeable rocks. But, if the pores or cracks are small, poorly connected, or nearly lacking, the material will yield only a small amount of water to wells.

The generalized groundwater resources map of Ohio shows comparative yields of wells in broad areas of the state. The blue areas are those in which large amounts of groundwater can be developed for industrial, municipal, and irrigation supplies. Groundwater in these areas is obtained from either limestone or permeable sand and gravel deposits. Smaller, but adequate, well supplies are available in the yellow and green areas, but the orange areas will yield only limited supplies of water to drilled wells.

SURFACE WATER RESOURCES IN OHIO

SURFACE WATER RESOURCES IN OHIO

Ohio receives an average of 38 inches of precipitation a year, with individual weather stations recording from 29 to 44 inches. It is fairly well distributed over the state and throughout the year, being generally higher in the southwestern part of Ohio and diminishing toward Lake Erie. October and February have the lowest monthly averages, 2.3 inches, while June has the highest average, 4.1 inches. Extremes in monthly precipitation have varied from zero to as much as 16 inches, resulting in periods of drought or flood.

Of the 38 inches of precipitation received annually, about 25 inches return to the atmosphere through evaporation from soil and plant transpiration (collectively referred to as evapotranspiration). The remaining 13 inches either run off in streamflow or percolate to groundwater storage.

Ohio has over 3,300 named streams and probably an equal number of unnamed tributaries. Their combined length approaches 44,000 miles, averaging roughly one mile of stream to each square mile of land area. About four-fifths of the state's stream mileage falls within the Ohio River drainage basin, while the remainder is in the Lake Erie drainage basin.

Particularly in the flat portions of Ohio, upland reservoirs are used for water storage to serve area needs. An upland, or upground, reservoir is constructed by excavating soil from the floor of the reservoir and compacting it into dikes. These structures are generally located near streams from which water is pumped during periods of high flow and stored until needed in periods of low flow. In northwest Ohio, which is quite flat, such reservoirs average about 24 feet in depth, compared to on-stream impoundments in the same area which average about 9 feet in depth. In northwest Ohio there are more than 60 upground water impoundments in service and the state water plan recommends that another 37 should be built to supply regional water needs for the next 40 years.

There are more than 50,000 lakes, ponds and reservoirs in Ohio, nearly all of which were man made. The great majority of these, over 90 percent, are small ponds of less than two acres in size. Many state agencies, municipalities, conservancy districts, and other public agencies have built lakes for such purposes as recreation, water supply, streamflow augmentation, and flood control. Some of the earliest state-owned lakes were built over 140 years ago to supply water to a network of canals constructed across Ohio. With the decline of the canal era, use of these lakes became largely recreational. Buckeye Lake, Grand Lake St. Marys, and Indian Lake are popular examples of former canal-feeder lakes. Examples of two recently-constructed state lakes are Salt Fork Reservoir (for recreation, water supply, and flood control) and Killdeer Upground Reservoir (recreation, streamflow augmentation, and irrigation).

The federal government has also been instrumental in building lakes in Ohio. Many flood control reservoirs have been built by the U.S. Army Corps of Engineers over the past 35 years. The state often participates in such projects for the development of recreational facilities. Burr Oak, Deer Creek, Delaware, Dillon, and Mosquito Creek lakes are examples of federal lakes around which the State of Ohio has developed recreation under agreements with the federal government.

There are also a large number of privately owned lakes and reservoirs in Ohio. Most numerous are the small farm ponds dotting the landscape, supplying water for wildlife and livestock. Hundreds of "borrow pits," water-filled excavations resulting from removal of earth for road construction, line our major highways.

The total amount of water used for all purposes in Ohio amounts to nearly 17 billion gallons per day. This represents almost 1,600 gallons per person per day.

About 75 percent of the total amount of water used in Ohio goes to electric power generating plants. Manufacturing processes use approximately 15 percent, while public supplies for domestic, commercial, and industrial uses constitute less than eight percent of the total. The remaining two percent represents non-urban usage for rural homes, livestock, recreation, and irrigation.

Ninety-five percent of all water used in Ohio comes from surface supplies such as lakes, streams, or reservoirs. Lake Erie and the Ohio River are important sources for water withdrawals, particularly for electric power generation. We should mention that most of the water used is not consumed, but ultimately returns to streams where it becomes available for further re-use.

Lake Erie is the largest surface water supply available to Ohioans. It is estimated that more than 3.5 billion gallons of Lake Erie water are used daily, nearly 22 percent of our total water use. Two of the largest cities in Ohio, Cleveland and Toledo, along with a large number of other cities, towns, and villages depend on Lake Erie for their water supply. It would be impossible to estimate the recreational value of this same body of water. Lake Erie has a total surface area of 9,910 square miles, of which 4,980 square miles lie within the boundaries of the United States. The lake is 241 miles long and 57 miles wide at its extremes and averages 58 feet in depth; the maximum depth is 210 feet.

Contrary to public opinion, water is not an unlimited resource. Too often wasted and misused, water makes the headlines only when we experience too little or too much — such as during conditions of drought or flood or when we discover that water has become useless to us because of pollution. Fortunately, recent trends indicate an increased public awareness and concern for our water resources. Recently enacted federal and state legislation is bringing about a concerted effort to halt water pollution on a statewide basis.

ORIGINAL VEGETATION OF OHIO

At the Time of the Earliest Land Surveys

ORIGINAL VEGETATION OF OHIO

At the Time of the Earliest Land Surveys

The Ohio wilderness that faced the pioneers about 200 years ago was part of one of the most extensive and magnificent deciduous hardwood forests on earth. This forest stretched as an almost unbroken stand from the Appalachians to the Mississippi, from the Great Lakes to the Gulf of Mexico. The variety of vegetation types was a reflection of the variable habitats and was a product of complex environmental factors of which climate, soil, and topography were the most significant. This map and descriptive material are valuable because the original vegetation provides an index for the potential development of future wooded areas in Ohio.

BEECH FORESTS

These forests were characterized by a large fraction of beech, sugar maple, red oak, white ash, and white oak. The most familiar types were beech-sugar maple and "wet beech" on poorly drained flatlands. In the dissected Allegheny Plateau, tuliptree grew generally in the valleys, the beech-maple-tuliptree subtype on the hillsides.

MIXED OAK FORESTS

These forests included a wide variety of primary forest types of which the most widespread were the white oak-red oak-hickory type and the white oak type. Covering ridgetops of the unglaciated Allegheny Plateau were forests of white oak, black oak, and chestnut, with sour gum, flowering dogwood, sassafras, Virginia pine, pitch pine and shortleaf yellow pine locally.

OAK-SUGAR MAPLE FORESTS

These included dry xero-mesophytic forests usually lacking beech, chestnut, red maple and tuliptree. Dominants included white oak, red oak, black walnut, and black maple as well as the sugar maple, white ash, red elm, basswood, bitternut, and shagbark hickories. Of indicator value today in the areas formerly occupied by these forests are Ohio buckeye, northern hackberry, honeylocust, blue ash, redbud, and red cedar.

ELM-ASH SWAMP FORESTS

These forests were consistent in having among the dominant trees of the canopy white elm, black and white ash and silver and red maple. Extremely wet phases contained cottonwood and sycamore. Swamp white oak, pin oak, white oak, black walnut, and tuliptree occasionally were present.

MIXED MESOPHYTIC FORESTS

Mixed mesophytic forests were dominated by broad-leaved and deciduous species but not exclusively so, with no single species comprising a very large fraction of the dominants. Segregates of the mixed mesophytic included oak-chestnut-tuliptree, oak-hickory-tuliptree, white oak-beech-maple and hemlock-beech-chestnut-red oak. North-facing slopes of the Portage escarpment in Lake and Ashtabula counties were covered with the latter forest type and are designated on the map by a black pattern overprinted on brown.

PRAIRIES

Most of these tall grass-dominated communities were located on wet lands, although some were on dry, well drained sites.

OAK SAVANNAS (OAK OPENINGS)

In the oak openings the oaks formed open thin groves with the lower ground between occupied by grasses and other herbaceous vegetation. Associated species with the white and black oak included trembling aspen, red maple, pin oak, sassafras, and prairie willow.

FRESHWATER MARSHES AND FENS

These areas differed from wet prairies in that grasses composed only a small fraction of the marsh vegetation. Where water stood through the summer to a depth of one to three feet, tall bulrushes, reed-grass, wild rice, cattail, bur-reed, wapato, pickerel-weed and rose-mallow grew.

SPHAGNUM PEAT BOGS

These occurred in undrained areas and contained remnants of the boreal evergreen forest: poison sumac, leatherleaf, cotton-sedge, round-leaved sundew, pitcher-plant, cranberries, and sphagnum moss.

BOTTOMLAND HARDWOOD FORESTS

These forests included vegetation types of variable composition and occupied older valleys and terraces of major streams as well as recent alluvium: beech-white oak, beech-maple, beech-elm-ash-yellow buckeye, elm-sycamore-river birch-red maple, and sweet gum-river birch.

LEGEND

- VIRGINIA - PITCH PINE
- OAK - GUM
- OAK - PINE
- ELM - ASH - RED MAPLE
- OAK - HICKORY
- MAPLE - BEECH - BIRCH
- NONFOREST

MAJOR FOREST TYPES OF OHIO

MAJOR FOREST TYPES of OHIO

When the first pioneers made their way into what is now Ohio, forests covered nearly 98 percent of the total land area. The forest was dense and untouched. Historical records indicate that trees over seven feet in diameter and 70 feet or more to the first limb were not uncommon. Virtually everything that these early settlers used for their rugged survival came from the forest.

As land was cleared to make way for towns and farms, Ohio's forests became a casualty of progress. By 1930, they reached their low point with trees covering only about 12 percent of the total land area. Since then, wise management of the forest and abandonment of marginal farmland as well as widespread forest conservation education have brought about an increase in wooded acreage to a point where today nearly 25 percent of Ohio is forested.

Forest land in Ohio is generally divided into two main categories, the glaciated region and the unglaciated. The latter is also referred to as the hill country and contains the bulk of Ohio's commercial forest land. The hill country, which is located in the southern and southeastern part of the state, is generally more than 50 percent forested.

Hardwood or deciduous trees make up 96 percent of Ohio's forests. The most important forest trees in Ohio are oak, hickory, poplar, walnut, ash, cherry, and maple. Oak and hickory make up the dominant forest type and account for about 50 percent of the total volume of hardwood in the state. In addition to the oak-hickory type, two other forest types are important. They are the elm-ash-red maple found along stream bottoms and valleys, and the maple-beech type generally found in our deep and rich agricultural soils. While the oak-hickory of the hill country is our most important forest type, the beech-maple produces our most valuable trees used for fine hardwood products. Maple, walnut, cherry, ash, and oak are all found in the beech-maple type and are highly prized for veneer and fine furniture.

Ohio today depends on the forest for a wide variety of products including furniture, flooring, paper, building supplies, sporting equipment, and even food. In addition, Ohio's forests shelter and sustain a wide variety of flora and fauna. Trees have become a necessary part of our urban environment by reducing traffic noise, purifying air, providing sight and wind screens, and generally beautifying the surroundings. Trees are even used as air quality indicators.

Through the use of modern forest management techniques, Ohio's renewable forest resource has become a benefit to all citizens of the state. The countless forest products harvested each year as well as the beauty and serenity of the forests themselves, make Ohio's woodlands vital to our life style.

selected bibliography

Aughanbaugh, John E., and Diller, Oliver D. *Performance Records of Woody Plants in the Secrest Arboretum.* Wooster: Ohio Agricultural Research and Development Center (OARDC), Research Circular 139, August 1965.

Bownocker, J.A. *Geologic Map of Ohio, 1920.* Columbus: Ohio Department of Natural Resources, Division of Geological Survey, Reprint, 1965.

Braun, E. Lucy. *The Woody Plants of Ohio.* Columbus: The Ohio State University Press, 1961.

Carman, J. Ernest. *The Geologic Interpretation of Scenic Features in Ohio.* Columbus: Ohio Department of Natural Resources, Division of Geological Survey, Reprint Series No. 3, 1946.

Dexter, Ralph W. "Conservation and the Ohio Academy of Science–An Historical Review." *Ohio Journal of Science,* Vol. 62, pp. 274 to 280.

Dotson, G.K. *Know Ohio's Soil Regions.* Revised, 1962. Columbus: Ohio Department of Natural Resources, Division of Lands and Soil.

Eckert, Allan W. *The Frontiersman.* New York: Bantam Books, 1967.

Elfner, Lynn; Melvin, Ruth W.; and Stuckey, Ronald. *A Guide to the Literature of Ohio's Natural Areas.* Columbus: Ohio Biological Survey, Information Circular no. 3, 1973.

Forsyth, Jane L. "The Geology of the Bowling Green Area, Wood County, Ohio." Reprint from *The Compass* (Sigma Gamma Epsilon), Vol. 43, no. 4, May 1966.

Fuller, J. Osborn. *Sharon Conglomerate, A Source of High Silica Raw Material.* Columbus: Ohio Department of Natural Resources, Division of Geological Survey, Reprint Series, 1967.

Goldthwait, Richard P. *Scenes in Ohio During the Last Ice Age.* March 1967, Reprint Series no. 1, Cincinnati Museum of Natural History, from *The Ohio Journal of Science* 59, (4): 193, July 1959.

Goldthwait, R.P.; White, G.W.; and Forsyth, J.F. *1961 Glacial Map of Ohio.* U.S. Geological Survey, Miscellaneous Geologic Investigation Map I-316.

Gordon, Robert B. *Natural Vegetation of Ohio.* Columbus: Ohio Biological Survey, 1966.

Hall, J.F. *The Geology of Hocking State Park.* Columbus: Ohio Department of Natural Resources, Division of Geological Survey, Information Circular no. 8, 1953.

Herrick, J. Arthur (Leader). *Natural Areas Project.* Columbus: Ohio Biological Survey, 1962, revised 1965.

Lawrence, Ann T. *The Travel Bug.* Cleveland: Emerson Press, 1972.

Norris, Stanley E., and Spieker, Andrew M. *Groundwater Resources of the Dayton Area.* Columbus: Ohio Department of Natural Resources, Division of Geological Survey, Water Supply Paper 1808, 1966.

Ohio Department of Economic and Community Development. *Beautiful Ohio, A Directory.* Columbus: 1973.

Paton, Robert R. "North Woods in Ohio." *Woodlands* (Ohio Forestry Association), February-April 1966.

Sherman, C.E. *Map of Ohio Showing Principal Streams and Their Drainage Areas.* Columbus: Ohio Department of Natural Resources, Division of Water, 1969.

Stout, Wilbur; Ver Steeg, Karl; and Lamb, G.F. *Geology of Water in Ohio, A Basic Report.* Columbus: Ohio Department of Natural Resources, Division of Geological Survey, Bulletin 44, 1944.

Ver Steeg, Karl. "1936 Mohican Forest Park." *Ohio Journal of Science,* Vol. 30, pp. 321-331.

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